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## THE FRIEDMANN TREATMENT FOR TUBERCULOSIS.

A REPORT ON THE PRESENT STATUS OF ITS INVESTIGATION BY A BOARD OF OFFICERS  
OF THE PUBLIC HEALTH SERVICE.

In November, 1912, Dr. F. F. Friedmann, of Berlin, reported before the medical society of that city a new method of treatment for tuberculosis, consisting of injections with what he described as living, avirulent tubercle bacilli. In the discussion following his paper a number of scientists, whose opinion was regarded as carrying weight, supported in greater or less degree his contentions that curative effects were derived from this method of treatment. On theoretical grounds, the treatment of tuberculosis by living, avirulent tubercle bacilli, if such could be secured, had been regarded as the most hopeful line along which work could be carried, and for this reason, and because of the measure of support which had been given to Dr. Friedmann's methods, the interest of the Public Health Service was attracted to the subject.

The number and source of inquiries received from the most diverse parts of the country showed that this interest was being widely shared and, to a large extent, had been stimulated by widespread publicity through newspapers and other publications.

It being one of the duties of the Public Health Service to investigate the diseases of man and their methods of control, correspondence was entered into through the Department of State to ascertain whether Dr. Friedmann would submit details of preparation and administration of his remedy and its effects on patients to representatives of the Public Health Service; and if so, under what conditions.

In correspondence, Dr. Friedmann expressed a willingness to place at the disposal of such investigators all the facts at his command and afford them every aid to prepare a "comprehensive and impartial report."

Before arrangements could be completed to send an officer to Berlin advices were received through the State Department that Dr. Friedmann was preparing to transfer his activities to the United States, and notification of the date of his sailing was received through the same source. Preparations were accordingly made to meet Dr. Friedmann on his arrival with a view to taking advantage of his expressed willingness to have an investigation made of his remedy;

and a board was appointed, consisting of Surg. John F. Anderson and Passed Asst. Surg. Arthur M. Stimson, to carry on the work.

At its first interview with Dr. Friedmann the board ascertained that he was not willing to reveal all the details of his methods, contrary to the offer contained in his previous correspondence. He willingly furnished a culture of the organism, however, which he stated was used in the preparation of his remedy, but declined to divulge the method of its use in the preparation of the remedy, and he would not make any definite statement as to the antecedents of the culture in question. He imposed, as a condition to finally furnishing detailed information regarding the methods of preparation of his remedy, a recognition by the board of favorable results from the use of the remedy on patients. He specifically disclaimed that his culture was possessed of either curative or immunizing properties against tuberculosis in the lower animals, but had no objection to an investigation of his claim that it was completely avirulent to them. He agreed to administer the remedy to patients for purposes of observation by us of its effect upon them and to give them such subsequent treatments as, in his opinion, were necessary to effect a cure.

The board, in effect, found that under the conditions mentioned it would have opportunity only to study a culture of the bacteria said to be used in some way by Dr. Friedmann in the preparation of his treatment, to test its pathogenicity on the lower animals, and to observe the effect of treatment by him of tuberculous patients with his finished remedy.

It will be recognized, of course, that such an arrangement was not satisfactory from a scientific standpoint; but, in view of the great importance of the matter to tuberculous patients throughout the country and in the hope that a valuable remedy might have at last been found, not only to cure tuberculous patients but to prevent the disease, the conditions imposed by Dr. Friedmann were accepted. An additional reason for taking advantage of opportunities to make every study possible was the assurance, by Dr. Friedmann, of its harmlessness when injected into human beings.

Arrangements were accordingly made with the staffs of Mount Sinai Hospital, Bellevue Hospital, the Montefiore Home, and Seton Hospital, whereby patients would be placed at the disposal of Dr. Friedmann for purposes of treatment. The thorough cooperation of these authorities has been had during the course of the observations, and it is a pleasure to acknowledge publicly their great courtesy. Practically all the patients in question had, for some time, been resident in these hospitals, were under the care of their visiting staffs, and our observations were made conjointly with those authorities; and, with their valuable assistance, the investigations have been undertaken and conducted in an impartial manner. The reticence

and attitude of Dr. Friedmann have in no way been allowed to interfere with our judgment of the effects as observed by us.

Considerable delay has been experienced in the treatment of cases on account of the repeated absence of Dr. Friedmann from New York, the first patients having received their first injection March 9 and the last of them their first treatment April 6. In all, 94 patients had received the first injection up to April 15, when it became necessary to inform Dr. Friedmann that on account of the halting progress in the demonstration the board was forced to limit its studies to these patients. Dr. Friedmann was also informed that in the interest of the demonstration these patients should be seen by him with a view of giving such additional injections of his remedy as might, in his judgment, be necessary to effect a cure. Up to the present time five of these patients have received a second injection.

On account of the enormous number of inquiries regarding the remedy, and the statements in newspapers purporting to be expressions of opinion of the board of officers as to its value, a statement was made in the Public Health Reports on March 21, 1913, to the effect that considerable time would necessarily be required to carry out the investigations; that no opinion had been expressed one way or the other, and that in the meantime the public was informed of the inadvisability of tuberculosis patients traveling long distances in the hope of receiving the treatment. This latter information was furnished on account of the hardships and disappointments suffered by those who had traveled to New York in the hope of receiving treatment.

We believe that at the present time we are not in a position to express an opinion based on the present condition of patients under observation. The disease for which the remedy is used is prolonged, and is characterized by periods of advancement and retrogression; it is also one in which psychic influences are a powerful factor. Time is, therefore, necessary in order to properly evaluate the effect of therapeutic measures.

We must not lose sight of the possible therapeutic value of this preparation and, on the other hand, it is necessary to guard against too great an optimism in respect to its merits. Without presenting in detail the condition of patients under observation we are in a position to state that the effects thus far observed do not justify that confidence in the remedy which has been inspired by widespread publicity. In our opinion harm may have been done by this undue publicity in so far as it has lessened the confidence of tuberculous persons in well-recognized methods of treatment or interrupted their use, and we are constrained to advise against any lessening of those well-known measures which not only have effected cures but which have reduced the incidence of the disease.

We are aware that Dr. Friedmann does not wish to be judged scientifically on newspaper statements, and he would undoubtedly dis-

claim responsibility for certain of those which have appeared. Nevertheless, it is on those that the public bases its opinion until replaced by reliable and unbiased scientific pronouncements supported by convincing data.

In his published address before the Berlin Medical Society Dr. Friedmann stated that the intramuscular injection was the standard or "sovereign" method of administering his treatment, but that it offered some difficulties, which were overcome by the combined or simultaneous intravenous and intramuscular method. The chief difficulty seems to have been that in certain individuals the "normal" local reaction (consisting of the development of an infiltrate from the size of a nut to that of an apple, which becomes gradually resorbed), either fails to develop any palpable induration whatever, or the infiltrate breaks down in the form of a discharging abscess. According to his article the course to pursue seems to be, in the first instance, to repeat injections at long intervals until the development of "hyper-susceptibility" causes the formation of an ideal infiltrate, or, in the second instance, to refrain entirely from further treatment for a prolonged period, since "further injections will only subject the patient to more abscesses without doing him any good."

Cases of this kind, therefore, would apparently be in need of treatment, according to Dr. Friedmann's ideas, for a long period of time. In our series of patients, Dr. Friedmann has almost exclusively made use of the intramuscular method alone in pulmonary cases and a very considerable proportion of them have either developed no considerable infiltrate at all or have suffered from abscess formation. It is evident, therefore, that a very considerable proportion of these patients may expect their treatment at the hands of Dr. Friedmann to extend over a prolonged period.

Concerning the culture submitted to us, we may state that a series of experiments is under way. The bacillus has been found to be an acid-fast organism, having properties quite different from those of any tubercle bacillus with which we are acquainted. It appears to be identical with an organism cultivated from a few loopfuls of the material used for injection which Dr. Friedmann permitted us to place on culture media in his presence. We requested Dr. Friedmann to furnish us with a larger amount of this material for examination, but this he has declined to do. We can state, however, that living acid-fast bacteria are being injected by the intramuscular and intravenous method, although we are ignorant of what medium they are suspended in or what additional substance or substances may be contained in the final mixture.

JOHN F. ANDERSON,  
*Chairman of the Board.*  
A. M. STIMSON,  
*Recorder.*



## WATER AND ICE SUPPLIED BY INTERSTATE CARRIERS.

On January 25, 1913, the Secretary of the Treasury, under authority of an act of Congress approved February 15, 1893, promulgated the following regulation regarding the water and ice furnished to passengers by common carriers in interstate traffic:

### AMENDMENT TO INTERSTATE QUARANTINE REGULATIONS.

Article 3, General Regulations, is hereby amended by the addition of the following paragraph:

"Paragraph 15. Water provided by common carriers on cars, vessels, or vehicles operated in interstate traffic for the use of passengers shall be furnished under the following conditions:

"(a) Water shall be certified by the State or municipal health authority within whose jurisdiction it is obtained as incapable of conveying disease: *Provided*, That water in regard to the safety of which a reasonable doubt exists may be used if the same has been treated in such manner as to render it incapable of conveying disease, and the fact of such treatment is certified by the aforesaid health officer.

"(b) Ice used for cooling such water shall be from a source the safety of which is certified by the State or municipal health authority within whose jurisdiction it is obtained, and before the ice is placed in the water it shall be first carefully washed with water of known safety and handled in such manner as to prevent its becoming contaminated by the organisms of infectious or contagious diseases: *Provided*, That the foregoing shall not apply to ice which does not come in contact with the water which is to be cooled.

"(c) Water containers shall be cleansed and thoroughly scalded with live steam at least once in each week that they are in operation."

Many requests have been received from common carriers for instructions as to how the requirements of the regulation can best be fulfilled. Therefore, for the information of those concerned, the following instructions have been drafted:

### INSTRUCTIONS RELATIVE TO THE CERTIFICATION OF THE WATER AND ICE FURNISHED TO PASSENGERS IN INTERSTATE TRAFFIC.

Samples of water and artificial ice from each and every source of supply should be subjected to bacteriological and chemical examination at least once in every six months by the proper State or municipal health authority within whose jurisdiction the supply is obtained, or by other person or persons competent to make such examinations and whose results will be accepted by the State or municipal health authority whose duty it is to issue certificates. Each new crop of natural ice should be examined and certified before use.

The common carrier desiring a certificate of the State or municipal health authority within whose jurisdiction the water or ice is obtained should make application therefor.

After the necessary examinations shall have been made the certificate should be issued on the form which is appended, one copy to be delivered to the common carrier, one copy to be forwarded to the Surgeon General, United States Public Health Service, Washington, D. C., and one copy to be retained as a matter of record and for future reference.

<sup>1</sup> Water and artificial ice should be examined at least every six months. Each new crop of natural ice should be examined and certified before use.

# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## IN CERTAIN STATES AND CITIES.

### New Jersey Report for April, 1913.

The State Board of Health of New Jersey reported that during the month of April, 1913, smallpox had been notified in the State as follows: One case in Freehold, 1 case in Millstone Township, Monmouth County, and 1 case in Paterson, Passaic County.

### California—Oakland.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended May 10, 1913, 2 new cases of smallpox had been notified in Oakland, Cal.

### Indiana—Evansville.

Surg. Clark, of the Public Health Service, reported by telegraph that 30 cases of smallpox had been notified in Evansville, Ind., during the week ended May 10, 1913, making a total of 744 cases reported during the current epidemic.

### Maryland—Camp Parole and Germantown.

The State Department of Health of Maryland reported by telegraph May 7, 1913, that 1 case of smallpox had been notified at Camp Parole, Anne Arundel County, Md., and on May 8 that 5 new cases had been notified at Camp Parole and 2 new cases at Germantown, Anne Arundel County.

### Miscellaneous State Reports.

| Places.                  | Cases. | Deaths. | Places.               | Cases. | Deaths. |
|--------------------------|--------|---------|-----------------------|--------|---------|
| Arizona (Apr. 1-30):     |        |         | Colorado (Apr. 1-30): |        |         |
| Counties—                |        |         | Counties—             |        |         |
| Gila.....                | 2      | .....   | Boulder.....          | 7      | .....   |
| Maricopa.....            | 40     | .....   | Denver.....           | 3      | .....   |
| Yavapai.....             | 2      | .....   | Grand.....            | 1      | .....   |
| Yuma.....                | 1      | .....   | Huerfano.....         | 1      | .....   |
| Total.....               | 45     | .....   | Kit Carson.....       | 1      | .....   |
| Connecticut (Apr. 1-30): |        |         | Larimer.....          | 4      | .....   |
| Counties—                |        |         | Ouray.....            | 6      | .....   |
| Middlesex.....           | 1      | .....   | Total.....            | 23     | .....   |
| Windham.....             | 1      | .....   | Maine (Jan. 1-31):    |        |         |
| Total.....               | 2      | .....   | Counties—             |        |         |
|                          |        |         | Lincoln.....          | 1      | .....   |
|                          |        |         | Oxford.....           | 1      | .....   |

## Miscellaneous State Reports—Continued.

| Places.                             | Cases. | Deaths. | Places.                              | Cases. | Deaths. |
|-------------------------------------|--------|---------|--------------------------------------|--------|---------|
| <b>Maine (Jan. 1-31)—Continued.</b> |        |         | <b>Maine (Mar. 1-31)—Continued.</b>  |        |         |
| Counties—Continued.                 |        |         | Counties—Continued.                  |        |         |
| Sagadahoc.....                      | 2      |         | Cumberland.....                      | 1      |         |
| Somerset.....                       | 1      |         | Knox.....                            | 27     | 1       |
| York.....                           | 20     |         | Oxford.....                          | 3      |         |
| Total.....                          | 25     |         | Waldo.....                           | 1      |         |
|                                     |        |         | York.....                            | 1      |         |
| <b>Maine (Feb. 1-28):</b>           |        |         | <b>Total.....</b>                    |        |         |
| Counties—                           |        |         | 34                                   |        | 1       |
| Cumberland.....                     | 1      |         | <b>Maine (Apr. 1-30):</b>            |        |         |
| Franklin.....                       | 5      |         | Counties—                            |        |         |
| Knox.....                           | 1      |         | Androscoggin.....                    | 7      |         |
| Sagadahoc.....                      | 1      |         | Cumberland.....                      | 1      |         |
| Oxford.....                         | 8      |         | Knox.....                            | 24     |         |
| Total.....                          | 16     |         | Sagadahoc.....                       | 3      |         |
|                                     |        |         | York.....                            | 1      |         |
| <b>Maine (Mar. 1-31):</b>           |        |         | <b>Total.....</b>                    |        |         |
| Counties—                           |        |         | 36                                   |        |         |
| Androscoggin.....                   | 1      |         | <b>Pennsylvania (Feb. 1-28).....</b> |        |         |
|                                     |        |         | 8                                    |        |         |

## City Reports for Week Ended Apr. 26, 1913.

| Places.                | Cases. | Deaths. | Places.                | Cases. | Deaths. |
|------------------------|--------|---------|------------------------|--------|---------|
| Buffalo, N. Y.....     | 1      |         | Muscatine, Iowa.....   | 1      |         |
| Cambridge, Ohio.....   | 1      | 8       | Nashville, Tenn.....   | 1      |         |
| Chattanooga, Tenn..... | 1      |         | New Bedford, Mass..... | 2      |         |
| Chicago, Ill.....      | 1      |         | New York, N. Y.....    | 1      |         |
| Cleveland, Ohio.....   | 1      |         | Northampton, Mass..... | 2      |         |
| Columbus, Ohio.....    | 4      |         | Oakland, Cal.....      | 1      |         |
| Danville, Ill.....     | 1      |         | Oklahoma, Okla.....    | 12     |         |
| Evansville, Ind.....   | 24     |         | Peoria, Ill.....       | 5      |         |
| Kansas City, Kans..... | 2      |         | Richmond, Va.....      | 1      |         |
| La Crosse, Wis.....    | 2      |         | Roanoke, Va.....       | 1      |         |
| Lexington, Ky.....     | 1      |         | St. Joseph, Mo.....    | 1      |         |
| Los Angeles, Cal.....  | 2      |         | Spokane, Wash.....     | 12     |         |
| Milwaukee, Wis.....    | 6      |         | Springfield, Ill.....  | 1      |         |
| Moline, Ill.....       | 3      |         | Toledo, Ohio.....      | 3      |         |
| Montgomery, Ala.....   | 5      |         | Zanesville, Ohio.....  | 6      |         |

<sup>1</sup> Three of these cases occurred in February and March, but were not reported.

## CEREBROSPINAL MENINGITIS.

## Cases and Deaths Reported by Cities for Week Ended Apr. 26, 1913.

| Places.                | Cases. | Deaths. | Places.                 | Cases. | Deaths. |
|------------------------|--------|---------|-------------------------|--------|---------|
| Baltimore, Md.....     |        | 1       | Muscatine, Iowa.....    |        | 1       |
| Chicago, Ill.....      | 2      | 1       | New Bedford, Mass.....  | 1      | 1       |
| Cincinnati, Ohio.....  | 1      | 1       | New Orleans, La.....    | 2      | 2       |
| Cleveland, Ohio.....   | 6      | 4       | New York, N. Y.....     | 8      | 6       |
| Elizabeth, N. J.....   | 1      | 1       | Oklahoma, Okla.....     | 1      |         |
| Kansas City, Kans..... | 1      |         | St. Joseph, Mo.....     |        | 1       |
| Lancaster, Pa.....     | 1      |         | St. Louis, Mo.....      | 1      | 2       |
| Los Angeles, Cal.....  | 8      | 3       | San Francisco, Cal..... | 1      |         |
| Manchester, N. H.....  | 1      | 1       | Trenton, N. J.....      | 1      | 1       |
| Milwaukee, Wis.....    | 3      | 3       |                         |        |         |

**POLIOMYELITIS (INFANTILE PARALYSIS.)****Cases and Deaths Reported by Cities for Week Ended April 26, 1913.**

During the week ended April 26, 1913, poliomyelitis was reported by cities as follows: New York, N. Y., 2 cases with 1 death; Wilkinsburg, Pa., 6 cases.

**ERYSIPELAS.****Cases and Deaths Reported by Cities for Week Ended Apr. 26, 1913.**

| Places.           | Cases. | Deaths. | Places.              | Cases. | Deaths. |
|-------------------|--------|---------|----------------------|--------|---------|
| Baltimore, Md.    |        | 2       | New York, N. Y.      |        | 10      |
| Binghamton, N. Y. | 3      |         | Niagara Falls, N. Y. | 2      |         |
| Boston, Mass.     |        | 1       | Peoria, Ill.         |        | 1       |
| Buffalo, N. Y.    |        | 1       | Philadelphia, Pa.    | 19     | 7       |
| Chicago, Ill.     | 15     | 4       | Pittsburgh, Pa.      | 8      | 2       |
| Cincinnati, Ohio. | 4      |         | Rutland, Vt.         | 1      |         |
| Cleveland, Ohio.  | 11     | 2       | St. Louis, Mo.       | 14     | 1       |
| Erie, Pa.         | 1      |         | San Francisco, Cal.  | 4      |         |
| Harrisburg, Pa.   | 2      |         | South Bethlehem, Pa. | 1      |         |
| Lynn, Mass.       |        | 1       | Springfield, Ill.    | 1      |         |
| Milwaukee, Wis.   | 4      |         | Wilkinsburg, Pa.     | 1      |         |
| Newark, N. Y.     |        | 1       | Yonkers, N. Y.       | 1      |         |
| New Castle, Pa.   | 1      |         |                      |        |         |

**LEPROSY.****California—San Francisco.**

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended May 10, 1913, 1 case of leprosy had been notified in San Francisco, Cal.

**PLAGUE.****Rats Collected and Examined.**

| Places.       | Week ended—   | Found dead. | Total collected. | Examined. | Found infected. |
|---------------|---------------|-------------|------------------|-----------|-----------------|
| California:   |               |             |                  |           |                 |
| Cities—       |               |             |                  |           |                 |
| Berkeley      | Apr. 26, 1913 | 3           | 162              | 107       |                 |
| Oakland       | do.           | 26          | 550              | 396       |                 |
| San Francisco | do.           | 9           | 1,755            | 1,128     |                 |
| Washington:   |               |             |                  |           |                 |
| City—         |               |             |                  |           |                 |
| Seattle       | do.           |             | 1,009            | 956       |                 |

**California—Squirrels Collected and Examined.**

During the week ended April 26, 1913, there were examined for plague infection 1,290 ground squirrels from Contra Costa County, 88 from Alameda County, 64 from Santa Clara County, and 25 from San Joaquin County. No plague-infected squirrel was found.



## PNEUMONIA.

## Cases and Deaths Reported by Cities for Week Ended Apr. 26, 1913.

| Places.             | Cases. | Deaths. | Places.                 | Cases. | Deaths. |
|---------------------|--------|---------|-------------------------|--------|---------|
| Auburn, N. Y.       | 1      | 1       | Mount Vernon, N. Y.     | 2      | .....   |
| Binghamton, N. Y.   | 3      | 2       | New Castle, Pa.         | 3      | .....   |
| Braddock, Pa.       | 1      | .....   | Newport, Ky.            | 1      | 1       |
| Chicago, Ill.       | 116    | 126     | Philadelphia, Pa.       | 21     | 55      |
| Cleveland, Ohio.    | 35     | 17      | Pittsburgh, Pa.         | 30     | 32      |
| Dunkirk, N. Y.      | 1      | 1       | Reading, Pa.            | 2      | 2       |
| Elmira, N. Y.       | 1      | 1       | San Diego, Cal.         | 1      | 1       |
| Fountain, Colo.     | 2      | .....   | San Francisco, Cal.     | 12     | .....   |
| Galesburg, Ill.     | 1      | 1       | Saratoga Springs, N. Y. | 2      | 1       |
| Grand Rapids, Mich. | 1      | 2       | Schenectady, N. Y.      | 3      | 3       |
| Homestead, Pa.      | 1      | 2       | Trenton, N. J.          | 10     | .....   |
| Kalamazoo, Mich.    | 3      | 3       | Wilkes-Barre, Pa.       | 1      | 3       |
| Lancaster, Pa.      | 2      | .....   | Williamsport, Pa.       | 1      | 2       |
| Los Angeles, Cal.   | 5      | 13      | York, Pa.               | 1      | .....   |
| Manchester, N. H.   | 4      | 4       |                         |        |         |

## RABIES.

## East Orange, N. J.—Rabies in an Animal.

The health officer at East Orange, N. J., reported the occurrence of rabies in a dog during the week ended April 26, 1913.

## TETANUS.

During the week ended April 26, 1913, tetanus was reported by cities as follows: Fall River, Mass., 1 case; Montclair, N. J., 1 case; New Orleans, La., 1 death; Portsmouth, Va., 1 death; Richmond, Va., 1 death; St. Louis, Mo., 2 cases with 2 deaths.

## SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.

## Juneau, Alaska—Measles.

Passed Asst. Surg. Krulish, of the Public Health Service, reported that during the week ended May 3, 1913, 6 cases of measles, with 1 death, had occurred in Juneau, Alaska, making a total of 10 cases, with 1 death, since April 19, 1913.

## Pittsburgh, Pa.—Measles.

Surg. Stoner, of the Public Health Service, reported by telegraph that during the week ended May 10, 1913, 162 cases of measles had been notified in Pittsburgh, Pa., making a total of 8,879, with 140 deaths, since the beginning of the outbreak, November 1, 1912.

## SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS—Contd.

## Cases and Deaths Reported by Cities for Week Ended Apr. 26, 1913.

| Cities.                                   | Popula-<br>tion,<br>United<br>States<br>census<br>1910. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuberculo-<br>sis. |         |
|---|---|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|
|   |   |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |
| Over 500,000 inhabitants:                 |   |   |             |         |          |         |                   |         |                    |         |
| Baltimore, Md.                            | 558,485   | 199                                       | 9           | 2       | 465      | 7       | 24                | 1       | 39                 | 18      |
| Boston, Mass.                             | 670,585   | 235                                       | 38          | 1       | 193      | 4       | 48                | 5       | 74                 | 19      |
| Chicago, Ill.                             | 2,185,283   | 752                                       | 148         | 22      | 612      | 16      | 353               | 25      | 249                | 82      |
| Cleveland, Ohio.                          | 560,663   | 166                                       | 47          | 3       | 176      | 2       | 35                | 3       | 25                 | 16      |
| New York, N. Y.                           | 4,766,883   | 1,677                                     | 368         | 42      | 1,359    | 26      | 323               | 11      | 499                | 241     |
| Philadelphia.                             | 1,549,008   | 535                                       | 57          | 9       | 682      | 9       | 105               | 6       | 80                 | 62      |
| Pittsburg, Pa.                            | 533,905   | 201                                       | 25          | 6       | 181      | 5       | 39                | 3       | 42                 | 14      |
| St. Louis, Mo.                            | 687,029   | 204                                       | 30          | 3       | 209      | 3       | 28                | 3       | 59                 | 24      |
| From 300,000 to 500,000 inhabit-<br>ants: |   |   |             |         |          |         |                   |         |                    |         |
| Buffalo, N. Y.                            | 423,715   | 173                                       | 19          | 4       | 170      | 5       | 20                |         | 10                 | 13      |
| Cincinnati, Ohio.                         | 364,463   | 125                                       | 15          |         | 32       |         | 12                | 1       | 30                 | 23      |
| Los Angeles, Cal.                         | 319,198   | 135                                       | 19          |         | 588      |         | 7                 |         | 34                 | 29      |
| Milwaukee, Wis.                           | 373,857   | 121                                       | 28          | 1       | 33       |         | 24                | 4       | 23                 | 13      |
| Newark, N. J.                             | 347,469   | 105                                       | 25          | 4       | 85       | 1       | 21                |         | 50                 | 11      |
| New Orleans, La.                          | 339,075   | 133                                       | 21          | 1       | 261      | 3       | 4                 |         | 23                 | 2       |
| San Francisco, Cal.                       | 416,912   | 128                                       | 4           | 1       | 29       | 1       | 8                 | 1       | 28                 | 11      |
| Washington, D. C.                         | 331,069   | 126                                       | 15          |         | 179      |         | 13                |         | 31                 | 17      |
| From 200,000 to 300,000 inhabit-<br>ants: |   |   |             |         |          |         |                   |         |                    |         |
| Jersey City, N. J.                        | 267,779   | 94  |             |         |          |         |                   | 2       |                    | 9       |
| Providence, R. I.                         | 224,326   | 78  | 20          |         | 12       | 1       | 13                | 1       | 5                  | 12      |
| From 100,000 to 200,000 inhabit-<br>ants: |   |   |             |         |          |         |                   |         |                    |         |
| Bridgeport, Conn.                         | 102,054   | 34  | 1           |         | 5        |         | 15                |         | 8                  | 3       |
| Cambridge, Mass.                          | 104,839   | 30  | 6           |         | 90       | 1       | 5                 |         | 6                  | 6       |
| Columbus, Ohio.                           | 181,548   | 60  | 8           | 1       | 6        |         | 9                 |         |                    | 5       |
| Dayton, Ohio.                             | 116,577   | 40  | 6           | 2       | 4        |         | 2                 |         |                    | 5       |
| Fall River, Mass.                         | 119,295   |   | 6           |         | 63       | 8       | 23                | 4       | 5                  | 3       |
| Grand Rapids, Mich.                       | 112,571   | 36  | 6           | 1       | 20       |         | 13                | 1       | 2                  | 1       |
| Lowell, Mass.                             | 106,294   | 33  | 4           |         | 31       |         | 7                 |         | 3                  | 5       |
| Nashville, Tenn.                          | 110,364   | 42  |             |         | 35       | 1       |                   |         | 3                  | 2       |
| Oakland, Cal.                             | 150,174   | 39  | 1           | 1       |          |         | 1                 |         | 1                  | 4       |
| Richmond, Va.                             | 127,628   | 53  | 1           |         | 40       | 1       | 1                 |         | 2                  | 6       |
| Spokane, Wash.                            | 104,402   | 42  | 2           |         | 8        |         | 3                 |         |                    | 2       |
| Toledo, Ohio.                             | 168,497   |   | 2           | 1       | 67       |         | 6                 | 2       | 15                 | 5       |
| Worcester, Mass.                          | 145,986   | 49  | 4           | 1       | 35       | 2       | 8                 |         | 8                  | 5       |
| From 50,000 to 100,000 inhabit-<br>ants:  |   |   |             |         |          |         |                   |         |                    |         |
| Altoona, Pa.                              | 52,127  | 18  | 4           |         |          |         | 6                 |         |                    | 1       |
| Bayonne, N. J.                            | 55,545  |   | 3           |         | 3        |         | 4                 |         | 4                  | 1       |
| Brockton, Mass.                           | 56,878  | 13  |             |         | 2        |         | 2                 |         | 6                  | 3       |
| Camden, N. J.                             | 94,538  |   | 11          |         | 43       |         | 10                |         | 6                  |         |
| Elizabeth, N. J.                          | 73,409  | 23  | 5           | 1       | 13       |         | 3                 |         | 4                  | 1       |
| Erie, Pa.                                 | 66,525  | 31  | 1           |         | 64       |         |                   |         | 2                  |         |
| Evansville, Ind.                          | 69,647  | 21  | 2           |         | 8        |         | 14                |         |                    | 5       |
| Fort Wayne, Ind.                          | 63,933  | 18  | 4           |         | 252      |         | 3                 |         |                    | 1       |
| Harrisburg, Pa.                           | 64,186  | 14  | 1           |         | 23       |         | 1                 |         |                    |         |
| Hartford, Conn.                           | 98,915  |   | 10          | 1       | 23       |         | 9                 |         | 3                  | 4       |
| Hoboken, N. J.                            | 70,324  |   | 5           |         | 17       |         | 2                 | 1       | 13                 | 2       |
| Johnstown, Pa.                            | 55,482  | 20  | 9           | 2       | 33       | 1       |                   |         |                    |         |
| Kansas City, Kans.                        | 82,331  |   | 3           |         | 37       |         | 5                 |         | 2                  |         |
| Lawrence, Mass.                           | 85,892  |   |             |         |          |         |                   |         | 2                  | 1       |
| Lynn, Mass.                               | 89,336  | 39  | 1           |         | 114      |         | 6                 | 1       |                    | 7       |
| Manchester, N. H.                         | 70,063  | 27  | 2           |         | 8        |         |                   |         | 3                  | 3       |
| New Bedford, Mass.                        | 96,652  | 44  | 4           |         | 118      |         | 7                 |         | 4                  | 3       |
| Oklahoma City, Okla.                      | 64,205  | 17  |             |         | 18       |         |                   |         |                    | 3       |
| Passaic, N. J.                            | 54,773  | 18  | 3           |         | 2        |         | 2                 | 1       | 2                  | 3       |
| Pawtucket, R. I.                          | 51,622  |   |             |         |          |         |                   |         |                    | 2       |
| Peoria, Ill.                              | 66,950  | 26  | 2           |         |          |         | 4                 |         |                    | 3       |
| Reading, Pa.                              | 96,071  | 29  | 2           |         | 56       | 1       | 3                 |         | 9                  |         |
| Saginaw, Mich.                            | 50,510  | 15  | 6           |         | 12       |         | 9                 |         |                    | 1       |
| St. Joseph, Mo.                           | 77,403  | 35  | 2           |         | 35       | 5       | 1                 | 1       | 2                  | 2       |
| Schenectady, N. Y.                        | 72,826  | 23  | 2           |         | 14       |         | 9                 |         | 1                  | 4       |
| South Bend, Ind.                          | 53,684  | 17  |             |         | 15       |         | 7                 |         |                    | 3       |
| Springfield, Ill.                         | 51,678  | 15  | 6           |         | 7        |         | 1                 |         |                    | 3       |
| Springfield, Mass.                        | 88,926  | 23  | 2           |         | 21       |         | 8                 |         | 3                  | 1       |
| Trenton, N. J.                            | 96,815  | 40  | 7           |         | 8        |         | 9                 | 2       | 9                  | 6       |
| Wilkes-Barre, Pa.                         | 67,105  | 23  | 1           |         | 7        |         | 4                 |         | 7                  | 1       |
| Yonkers, N. Y.                            | 79,803  | 25  | 4           |         | 13       |         | 2                 |         | 6                  | 2       |
| From 25,000 to 50,000 inhabitants:        |   |   |             |         |          |         |                   |         |                    |         |
| Atlantic City, N. J.                      | 46,150  | 11  | 1           |         | 69       |         | 1                 |         | 1                  |         |
| Auburn, N. Y.                             | 34,668  | 7   | 1           |         | 12       |         |                   |         |                    |         |
| Aurora, Ill.                              | 29,807  | 8   |             |         |          |         | 8                 |         |                    |         |
| Binghamton, N. Y.                         | 48,443  | 19  | 4           |         | 1        |         | 1                 |         | 3                  | 3       |
| Brookline, Mass.                          | 27,792  |   | 2           |         | 8        |         | 1                 |         |                    |         |
| Chattanooga, Tenn.                        | 44,604  |   | 1           |         |          |         |                   |         | 2                  |         |

## SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS—Contd.

Cases and Deaths Reported by Cities for Week Ended Apr. 26, 1913—Contd.

| Cities.   | Popula-<br>tion,<br>United<br>States<br>census<br>1910. | Total<br>deaths<br>from<br>all<br>causes. | Diphtheria. |         | Measles. |         | Scarlet<br>fever. |         | Tuberculo-<br>sis. |         |
|---|---|---|-------------|---------|----------|---------|-------------------|---------|--------------------|---------|
|   |   |   | Cases.      | Deaths. | Cases.   | Deaths. | Cases.            | Deaths. | Cases.             | Deaths. |
| From 25,000 to 50,000 Inhabit-<br>ants—Continued. |   |   |             |         |          |         |                   |         |                    |         |
| Chelsea, Mass.                                    | 32,452  | 18  | 4           |         | 6        |         | 2                 |         | 3                  |         |
| Chicopee, Mass.                                   | 25,401  | 6   |             |         |          |         | 2                 |         |                    | 2       |
| Danville, Ill.                                    | 27,871  | 7   | 1           |         | 19       |         | 1                 |         |                    | 1       |
| East Orange, N. J.                                | 34,371  |   | 1           |         | 21       |         | 1                 |         | 1                  |         |
| Elmira, N. Y.                                     | 37,176  | 11  | 1           |         | 12       |         |                   |         | 1                  |         |
| Everett, Mass.                                    | 33,484  | 10  | 2           |         | 15       |         | 1                 |         | 1                  | 1       |
| Fitchburg, Mass.                                  | 37,826  | 12  |             |         | 37       |         | 1                 |         | 3                  |         |
| Haverhill, Mass.                                  | 44,115  | 7   | 1           |         | 18       |         |                   |         | 5                  |         |
| Kalamazoo, Mich.                                  | 39,437  | 22  | 1           |         |          |         | 1                 |         |                    |         |
| La Crosse, Wis.                                   | 30,417  |   | 4           |         |          |         |                   |         | 1                  | 1       |
| Lancaster, Pa.                                    | 47,227  |   | 6           |         | 49       |         | 1                 |         | 2                  |         |
| Lexington, Ky.                                    | 35,099  | 15  | 1           |         | 6        |         |                   |         | 2                  | 3       |
| Lynchburg, Va.                                    | 29,494  | 13  | 1           |         | 19       | 1       |                   |         |                    | 1       |
| Montgomery, Ala.                                  | 38,136  | 23  |             |         | 2        |         |                   |         |                    | 1       |
| Mount Vernon, N. Y.                               | 30,919  |   | 1           |         | 15       |         | 1                 |         |                    |         |
| Newcastle, Pa.                                    | 36,280  |   | 1           |         | 41       |         |                   |         |                    |         |
| Newport, Ky.                                      | 30,309  | 7   | 1           |         |          |         | 1                 |         | 2                  | 2       |
| Newton, Mass.                                     | 39,806  | 15  | 1           |         | 8        |         |                   |         | 2                  | 1       |
| Niagara Falls, N. Y.                              | 30,445  | 16  |             |         | 11       |         | 24                | 2       | 1                  | 1       |
| Norristown, Pa.                                   | 27,875  | 9   |             |         | 1        |         | 1                 |         | 2                  | 1       |
| Orange, N. J.                                     | 29,630  | 15  |             |         | 9        |         |                   |         | 8                  |         |
| Pasadena, Cal.                                    | 30,291  | 13  |             |         | 3        |         |                   |         |                    | 1       |
| Pittsfield, Mass.                                 | 32,121  | 10  | 1           |         | 7        |         | 4                 | 1       |                    |         |
| Portsmouth, Va.                                   | 33,190  | 12  | 1           |         | 13       |         |                   |         |                    | 1       |
| Racine, Wis.                                      | 38,002  | 13  |             |         | 17       |         | 3                 |         |                    |         |
| Roanoke, Va.                                      | 34,874  | 12  |             |         | 20       |         | 1                 |         | 4                  | 1       |
| San Diego, Cal.                                   | 39,578  | 8   | 2           |         | 10       |         |                   |         | 8                  | 7       |
| Superior, Wis.                                    | 40,384  | 16  | 2           |         |          | 3       | 3                 |         |                    | 3       |
| Taunton, Mass.                                    | 34,259  | 19  | 2           |         |          |         | 1                 | 1       | 2                  | 3       |
| Waltham, Mass.                                    | 27,834  | 7   | 1           |         | 16       |         |                   |         |                    | 1       |
| Wheeling, W. Va.                                  | 41,641  | 16  | 3           |         | 11       |         |                   |         | 2                  | 2       |
| Williamsport, Pa.                                 | 31,860  | 8   | 1           |         | 16       |         | 1                 |         |                    |         |
| Wilmington, N. C.                                 | 25,748  | 8   |             |         | 5        |         |                   |         |                    |         |
| York, Pa.   | 44,750  |   | 2           |         | 2        | 1       | 4                 |         | 5                  |         |
| Zanesville, Ohio.                                 | 28,026  | 9   |             |         |          |         | 3                 |         |                    | 1       |
| Less than 25,000 inhabitants:                     |   |   |             |         |          |         |                   |         |                    |         |
| Ann Arbor, Mich.                                  | 14,817  | 6   |             |         | 20       |         | 2                 |         | 6                  |         |
| Beaver Falls, Pa.                                 | 12,191  | 0   |             |         | 8        |         | 1                 |         |                    |         |
| Braddock, Pa.                                     | 17,759  |   | 3           |         | 2        |         |                   |         |                    |         |
| Cambridge, Ohio.                                  | 17,327  | 8   |             |         | 1        |         |                   |         |                    | 2       |
| Clinton, Mass.                                    | 13,075  | 0   |             |         |          |         |                   |         | 2                  |         |
| Columbus, Ind.                                    | 6,719   | 4   |             |         |          |         | 1                 |         |                    |         |
| Concord, N. H.                                    | 21,477  | 8   |             |         | 38       |         |                   |         |                    |         |
| Cumberland, Md.                                   | 21,839  | 8   |             |         | 14       | 1       |                   |         | 1                  |         |
| Dunkirk, N. Y.                                    | 11,616  | 5   |             |         | 7        |         |                   |         |                    |         |
| Fountain, Colo.                                   | 150   | 1   | 1           |         | 3        |         |                   |         |                    |         |
| Franklin, N. H.                                   | 6,132   | 1   |             |         | 3        |         |                   |         |                    |         |
| Galesburg, Ill.                                   | 22,089  | 5   |             |         |          |         | 1                 |         |                    |         |
| Harrison, N. J.                                   | 14,489  | 3   |             |         |          |         | 2                 |         |                    |         |
| Homestead, Pa.                                    | 18,713  | 11  |             |         | 7        |         |                   |         |                    | 1       |
| Kearny, N. J.                                     | 18,659  | 2   | 2           |         | 4        |         | 2                 |         | 2                  |         |
| Kokomo, Ind.                                      | 8,261   | 11  |             |         | 31       | 1       |                   |         |                    |         |
| La Fayette, Ind.                                  | 20,081  | 17  |             |         |          |         |                   |         |                    | 1       |
| Marquette, Wis.                                   | 14,610  | 3   |             |         |          |         |                   |         |                    |         |
| Marlboro, Mass.                                   | 13,606  | 5   |             |         | 15       |         | 1                 |         | 2                  |         |
| Massillon, Ohio.                                  | 23,830  | 1   | 3           |         |          |         |                   |         |                    |         |
| Medford, Mass.                                    | 23,150  | 4   |             |         | 20       |         | 3                 |         |                    |         |
| Melrose, Mass.                                    | 15,715  | 5   |             |         | 2        |         | 2                 |         |                    |         |
| Moline, Ill.                                      | 24,190  | 7   | 1           |         | 3        |         | 2                 |         |                    | 1       |
| Montclair, N. J.                                  | 21,450  | 5   |             |         | 5        |         | 2                 |         |                    | 1       |
| Morristown, N. J.                                 | 12,507  |   |             |         | 1        |         |                   |         | 2                  |         |
| Muscatine, Iowa.                                  | 16,000  | 7   |             |         | 28       |         |                   |         |                    |         |
| Nanticoke, Pa.                                    | 18,857  | 6   |             |         | 2        |         | 2                 |         |                    |         |
| Newburyport, Mass.                                | 19,240  | 3   |             |         | 23       |         | 1                 |         |                    | 1       |
| North Adams, Mass.                                | 22,019  | 9   |             |         |          |         |                   |         |                    |         |
| Northampton, Mass.                                | 23,310  | 8   | 4           |         |          |         | 1                 |         |                    |         |
| Palmer, Mass.                                     | 7,801   | 3   |             |         |          |         |                   |         |                    |         |
| Plainfield, N. J.                                 | 23,550  | 8   |             |         | 1        |         | 3                 | 1       | 3                  |         |
| Rochester, Minn.                                  | 6,843   | 8   |             |         | 32       |         | 2                 |         | 2                  |         |
| Rutland, Vt.                                      | 6,719   | 2   |             |         | 3        | 1       | 4                 | 1       |                    |         |
| Saratoga Springs, N. Y.                           | 13,534  | 8   |             |         | 7        |         |                   |         | 4                  | 1       |
| South Bethlehem, Pa.                              |   | 5   |             |         | 7        | 1       | 1                 |         |                    |         |
| Stetton, Pa.                                      | 14,479  | 5   |             |         | 4        |         | 2                 |         | 2                  |         |
| Wilkesburg, Pa.                                   | 18,594  | 7   | 1           |         | 2        |         |                   |         |                    |         |
| Woburn, Mass.                                     | 14,254  | 4   |             |         |          |         |                   |         | 1                  |         |

## **IN INSULAR POSSESSIONS.**

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### **HAWAII.**

#### **Plague.**

A fatal case of pneumonic plague occurred May 2 at Honokaa, and on May 8 a case of the disease in the same form was notified at Paaauhau, a locality in the vicinity of Honokaa. Both cases occurred in members of the same family.

#### **Examination of Rodents.**

Rats and mongoose have been examined as follows: At Honolulu week ended April 19, 1913, 413. Hilo week ended April 5, 834; week ended April 12, 1,054. Honokaa week ended April 5, 2,172; week ended April 12, 2,175. No plague-infected rodent was found.

### **PHILIPPINE ISLANDS.**

#### **Manila—Plague.**

Surg. Heiser, chief quarantine officer and director of health for the Philippine Islands, reports: During the week ended March 29, 1913, 1 case of plague with 1 death was notified in Manila.

### **PORTO RICO.**

#### **Rodents Collected and Examined.**

Passed Asst. Surg. Creel reports that during the week ended April 26, 1913, there were examined 1,636 rodents, collected from various points in Porto Rico, and that of these 608 were collected from various parts of San Juan municipality. None was found plague infected.





## FOREIGN REPORTS.

### ARABIA.

#### Aden—Plague.

From April 4 to 19, 1913, there were notified at Aden 6 cases of plague, with 5 deaths.

### ARGENTINA.

#### Rosario—Plague.

Four cases of plague with 1 death were notified at Rosario January 4, 1913. The cases occurred in a crowded tenement, but there was no spread of the disease. Plague is reported to be endemic in the city.

### BRAZIL.

#### Para—Yellow Fever.

The American consul reported May 10, 1913, the occurrence of a fatal case of yellow fever.

#### Pernambuco—Mortality in 1912.

During the year 1912 the total number of deaths reported in Pernambuco was 8,341 in a population of 210,000, as compared with 10,234 deaths during the year 1911. Smallpox caused 762 deaths in 1912, as compared with 2,440 in 1911. The following table shows the number of deaths from the principal communicable diseases present in the city during the year:

| Diseases.         | Deaths, 1912.    |                   | Diseases.           | Deaths, 1912.    |                   |
|-------------------|------------------|-------------------|---------------------|------------------|-------------------|
|                   | January to June. | July to December. |                     | January to June. | July to December. |
| Smallpox.....     | 526              | 236               | Bubonic plague..... | 9                | 11                |
| Yellow fever..... | 40               | 1                 | Dysentery.....      | 161              | 83                |

### CHINA.

#### Hongkong—Cholera—Plague.

Surg. Brown reports: During the week ended March 29, 1913, there were notified at Hongkong 5 cases of cholera with 5 deaths and 3 cases of plague with 3 deaths.

Consul General Andrews reported by telegraph May 14 the occurrence of 12 cases of plague.

**Plague-Infected Rats.**

During the same period 2,168 rats were examined for plague infection. Six plague-infected rats were found.

**ECUADOR.****Yellow Fever.**

During the month of April, 1913, there were notified in Guayaquil and vicinity 50 cases of yellow fever, with 22 deaths.

**JAPAN.****Summary of Cholera.**

From the beginning of the epidemic in August, 1912, to March 3, 1913, there were reported in Japan 2,634 cases of cholera with 1,696 deaths, occurring in 28 prefectures. A total of 586 cholera carriers was reported found in 20 prefectures.

**Kobe—Communicable Diseases.**

Communicable diseases were reported in Kobe as follows:

**WEEK ENDED APR. 5, 1913.**

| Diseases.          | New cases. | Deaths. | Remain-<br>ing under<br>treat-<br>ment. | Diseases.          | New cases. | Deaths. | Remain-<br>ing under<br>treat-<br>ment. |
|--------------------|------------|---------|---|--------------------|------------|---------|---|
| Typhoid fever..... | 3          | .....   | 27                                      | Dysentery.....     | .....      | .....   | 2                                       |
| Diphtheria .....   | 5          | .....   | 7                                       | Scarlet fever..... | .....      | .....   | 2                                       |

**WEEK ENDED APR. 12, 1913.**

|                    |    |       |    |                    |       |       |       |
|--------------------|----|-------|----|--------------------|-------|-------|-------|
| Typhoid fever..... | 4  | ..... | 15 | Dysentery.....     | ..... | ..... | ..... |
| Diphtheria .....   | 12 | 5     | 9  | Scarlet fever..... | 1     | ..... | 2     |

**Examination of Rats.**

During the month of March, 1913, 24,205 rats were examined in Kobe. No plague-infected rat was found.

**Taiwan (Formosa)—Plague.**

During the week ended April 12, 1913, 41 cases of plague with 18 deaths were notified at Kagi, Taiwan.

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.****Reports Received During Week Ended May 16, 1913.****CHOLERA.**

| Places.   | Date.                 | Cases. | Deaths. | Remarks.   |
|---|-----------------------|--------|---------|--|
| Dutch East Indies:<br>Celebes—<br>Batangmata..... | Mar. 8-14.....        |        |         | Present.   |
| India:<br>Bassein.....                            | Mar. 16-22.....       | 12     | 11      |  |
| Bombay.....                                       | Mar. 31-Apr. 5.....   | 1      | 1       |  |
| Madras.....                                       | do.....               | 1      | 1       |  |
| Moulmine.....                                     | Mar. 16-22.....       | 2      | 2       |  |
| Japan.....  |                       |        |         | Total year 1912: Cases, 2,722; deaths, 1,678, exclusive of Taiwan. Epidemic, Aug. 1, 1912-Mar. 3, 1913: Cases, 2,634; deaths, 1,696, including cases p. 2233, Vol. XXVII, and p. 859, Vol. XXVIII. |
| Prefectures—<br>Akita.....                        | Dec. 2.....           | 1      | 1       |  |
| Chiba.....  | Nov. 21-Mar. 3.....   | 116    | 83      |  |
| Ehime.....  | Sept. 21-Dec. 2.....  | 52     | 21      |  |
| Fukuoka.....                                      | Aug. 1-Dec. 2.....    | 816    | 531     |  |
| Fukushima.....                                    | Dec. 5.....           | 1      |         |  |
| Hio-go.....                                       | Sept. 27-Nov. 24..... | 137    | 100     |  |
| Hiroshima.....                                    | Sept. 21-Nov. 23..... | 49     | 32      |  |
| Ibariki.....                                      | Dec. 6.....           | 2      | 2       |  |
| Iwate.....  | Dec. 16.....          | 2      | 1       |  |
| Kagawa.....                                       | Oct. 12-Nov. 21.....  | 15     | 10      |  |
| Kagoshima.....                                    | Sept. 21-Oct. 18..... | 11     | 5       |  |
| Kanagawa.....                                     | Sept. 25-Feb. 4.....  | 122    | 94      |  |
| Yokohama.....                                     | Sept. 29-Jan. 9.....  | 39     |         | Including Yokohama. Sept. 25-Dec. 7: 9 cases from vessels.   |
| Kochi.....  | Oct. 19-Dec. 4.....   | 25     | 14      |  |
| Kioto.....  | Sept. 21-Nov. 1.....  | 5      | 5       |  |
| Kumamoto.....                                     | do.....               | 15     | 9       |  |
| Minami Tokaki gun.....                            | Sept. 15-Dec. 2.....  |        |         | 40 cases not included in total.  |
| Nagasaki.....                                     | do.....               | 188    | 112     | Including Nagasaki city, and with outlying islands, 134 deaths.  |
| Oita.....   | Sept. 21-Dec. 5.....  | 38     | 21      |  |
| Okayama.....                                      | Sept. 21-Nov. 22..... | 67     | 39      |  |
| Osaka.....  | Sept. 21-Mar. 3.....  | 165    | 108     |  |
| Saga.....   | Sept. 21-Dec. 3.....  | 109    | 76      |  |
| Saitama.....                                      | Oct. 12-18.....       | 3      | 2       |  |
| Shidzuoka.....                                    | Oct. 19-Mar. 3.....   | 90     | 33      |  |
| Shimane.....                                      | To Mar. 3.....        | 2      |         |  |
| Taiwan (Formosa).....                             |                       |        |         | Total year 1912: Deaths, 256; cases, 333.  |
| Tokyo.....  | Sept. 23-Feb. 4.....  | 314    | 217     |  |
| Tokushima.....                                    | Sept. 15-Dec. 1.....  | 8      | 5       |  |
| Wakamatsu.....                                    | Nov. 26.....          |        |         | 1 case not included in total.  |
| Wakayama.....                                     | Oct. 19-Nov. 16.....  | 13     | 12      |  |
| Yamaguchi.....                                    | Sept. 21-Nov. 26..... | 267    | 162     |  |
| Yamanchi.....                                     | Feb. 3.....           | 1      | 1       |  |

**YELLOW FEVER.**

|                       |                    |    |    |                       |
|-----------------------|--------------------|----|----|-----------------------|
| Brazil:<br>Bahia..... | Mar. 9-Apr. 5..... | 7  | 5  |                       |
| Para.....             |                    |    |    | May 10, 1 fatal case. |
| Pernambuco.....       |                    |    |    | Year 1912: Cases, 41. |
| Ecuador.....          | Apr. 1-30.....     | 50 | 22 | And vicinity.         |

**PLAGUE.**

|                         |                     |   |   |                       |
|-------------------------|---------------------|---|---|-----------------------|
| Arabia:<br>Aden.....    | Apr. 12-21.....     | 5 | 5 |                       |
| Brazil:<br>Bahia.....   | Mar. 9-Apr. 5.....  | 9 | 4 |                       |
| Pernambuco.....         |                     |   |   | Year 1912: Cases, 20. |
| China:<br>Hongkong..... | Feb. 28-Mar. 5..... | 4 | 4 | May 14, present.      |

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received During Week Ended May 16, 1913—Continued.****PLAGUE—Continued.**

| Places.             | Date.               | Cases. | Deaths. | Remarks.      |
|---------------------|---------------------|--------|---------|---------------|
| Ecuador:            |                     |        |         |               |
| Guayaquil.....      | Apr. 1-30.....      | 19     | 6       | And vicinity. |
| Hawaii:             |                     |        |         |               |
| Honakaa.....        | May 2.....          | 1      | 1       |               |
| Paaubau.....        | May 8.....          | 1      |         |               |
| India:              |                     |        |         |               |
| Bombay.....         | Mar. 31-Apr. 12.... | 406    | 352     |               |
| Karachi.....        | do.....             | 33     | 27      |               |
| Japan:              |                     |        |         |               |
| Taiwan—             |                     |        |         |               |
| Kagi.....           | Mar. 18-24.....     | 41     | 18      |               |
| Persia:             |                     |        |         |               |
| Bushir.....         | Apr. 17.....        |        |         | Present.      |
| Philippine Islands: |                     |        |         |               |
| Manila.....         | Mar. 29.....        | 1      | 1       |               |
| Turkey in Asia:     |                     |        |         |               |
| Jiddah.....         | Apr. 19.....        | 1      |         |               |

**SMALLPOX.**

|                       |                     |    |    |                              |
|-----------------------|---------------------|----|----|------------------------------|
| Arabia:               |                     |    |    |                              |
| Aden.....             | Apr. 8-21.....      | 5  | 1  |                              |
| Austria-Hungary:      |                     |    |    |                              |
| Fiume.....            | Apr. 18-24.....     | 3  |    |                              |
| Trieste.....          | Apr. 6-12.....      | 6  |    |                              |
| Brazil:               |                     |    |    |                              |
| Pernambuco.....       | Mar. 16-31.....     |    | 10 | Year 1912: Cases, 762.       |
| Canada:               |                     |    |    |                              |
| Montreal.....         | Apr. 27-May 3.....  | 9  |    |                              |
| Niagara Falls.....    | Apr. 1-21.....      | 12 |    |                              |
| Ottawa.....           | Apr. 20-26.....     | 3  |    |                              |
| St. John, Quebec..... | do.....             | 1  | 1  |                              |
| Toronto.....          | Apr. 27-May 3.....  | 11 |    |                              |
| China:                |                     |    |    |                              |
| Hongkong.....         | Feb. 28-Mar. 5..... | 4  | 3  |                              |
| Tientsin.....         | Mar. 23-Apr. 12.... | 3  | 4  |                              |
| France:               |                     |    |    |                              |
| Paris.....            | Apr. 13-26.....     | 3  |    |                              |
| Germany.....          |                     |    |    | Total Apr. 13-26: Cases, 11. |
| Great Britain:        |                     |    |    |                              |
| Liverpool.....        | Apr. 20-26.....     |    | 1  |                              |
| Greece:               |                     |    |    |                              |
| Patras.....           | Apr. 14-27.....     |    | 10 |                              |
| India:                |                     |    |    |                              |
| Bombay.....           | Mar. 23-Apr. 12.... | 84 | 42 |                              |
| Karachi.....          | do.....             | 30 | 13 |                              |
| Madras.....           | do.....             | 6  | 3  |                              |
| Italy:                |                     |    |    |                              |
| Palermo.....          | Apr. 6-12.....      | 33 |    |                              |
| Mexico:               |                     |    |    |                              |
| Aguascalientes.....   | Apr. 14-27.....     |    | 8  |                              |
| Guadalajara.....      | Apr. 6-19.....      | 8  |    |                              |
| Hermosillo.....       | May 3.....          | 2  |    |                              |
| Manzanillo.....       |                     |    |    | 2 cases among troops.        |
| Monterey.....         | Apr. 14-20.....     |    | 1  |                              |
| Salina Cruz.....      | Mar. 31-Apr. 19.... | 4  | 1  |                              |
| San Luis Potosi.....  | Feb. 23-Mar. 15.... | 2  |    |                              |
| Newfoundland:         |                     |    |    |                              |
| St. Johns.....        | Apr. 13-May 3.....  | 5  |    |                              |
| Russia:               |                     |    |    |                              |
| Libau.....            | Apr. 6-13.....      | 2  |    |                              |
| Spain:                |                     |    |    |                              |
| Cadiz.....            | Mar. 1-31.....      |    | 1  |                              |
| Valencia.....         | Apr. 13-26.....     | 16 | 2  |                              |
| Straits Settlements:  |                     |    |    |                              |
| Singapore.....        | Mar. 16-29.....     | 2  |    |                              |
| Switzerland:          |                     |    |    |                              |
| Aargau, Canton.....   | Mar. 31-Apr. 5..... | 5  |    |                              |
| Basel.....            | Apr. 6-19.....      | 4  |    |                              |
| Turkey in Asia:       |                     |    |    |                              |
| Mersina.....          | Apr. 14-20.....     | 60 | 30 | Present.                     |
| Tarsus.....           | Apr. 12.....        |    |    |                              |
| Turkey in Europe:     |                     |    |    |                              |
| Constantinople.....   | Apr. 13-19.....     |    | 6  |                              |

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1912, to May 9, 1913.

## CHOLERA.

| Places.                 | Date.                | Cases. | Deaths. | Remarks.   |
|-------------------------|----------------------|--------|---------|--|
| Bulgaria:               |                      |        |         |  |
| Eski Saghara.....       | Dec. 9.....          | 2      | .....   |  |
| Sofia.....              | Nov. 21-Dec. 16...   | 6      | 1       |  |
| Shumia.....             | Dec. 30.....         | 18     | .....   |  |
| China:                  |                      |        |         |  |
| Foochow.....            | Nov. 20-Dec. 2.....  | .....  | .....   | Isolated cases.  |
| Hongkong.....           | Mar. 23-29.....      | 5      | 5       | Among Chinese.   |
| Shanghai.....           |                      |        |         | Total 1912: Cases, 10, in the foreign settlement.  |
| Dutch East Indies:      |                      |        |         |  |
| Borneo—                 |                      |        |         |  |
| Bandermasin.....        | Nov. 22-30.....      | 5      | 5       |  |
| Pontrank.....           | Oct. 6.....          | 1      | .....   |  |
| Samarinda.....          | Oct. 9-Nov. 2.....   | 26     | 25      |  |
| Singawang.....          | Oct. 8-Nov. 1.....   | 2      | 2       |  |
| Java—                   |                      |        |         |  |
| Batavia.....            | Nov. 9-Dec. 31.....  | 40     | 28      |  |
| Do.....                 | Jan. 19-Mar. 15..... | 117    | 92      |  |
| Madicoen.....           | Sept. 15-Nov. 9..... | 192    | 105     |  |
| Megalang.....           | Oct. 7-12.....       | 9      | 6       |  |
| Paseroean Residency..   | Sept. 20-26.....     | 2      | 1       |  |
| Samarang.....           | July 19-Dec. 26..... | 591    | 485     |  |
| Do.....                 | Dec. 27-Jan. 30..... | 7      | 7       |  |
| Surabaya.....           | Oct. 16-Nov. 28..... | 4      | 3       |  |
| Sumatra—                |                      |        |         |  |
| Air Tiris.....          | Dec. 3-22.....       | 11     | 11      |  |
| Benkoelen.....          | Nov. 3-30.....       | 3      | 1       |  |
| Koeoh.....              | Dec. 3-15.....       | 4      | 9       |  |
| Jambi.....              | Sept. 18-24.....     | 1      | .....   |  |
| Roembo.....             | Dec. 3-15.....       | 2      | 2       |  |
| Telokbetong.....        | Nov. 1-Dec. 31.....  | 181    | 20      |  |
| India:                  |                      |        |         |  |
| Bassein.....            | Jan. 25-Mar. 15..... | 91     | 79      |  |
| Bombay.....             | Nov. 17-Mar. 29..... | 217    | 153     |  |
| Calcutta.....           | Nov. 9-Mar. 8.....   | .....  | 573     |  |
| Cochin.....             | Oct. 10-Nov. 9.....  | 6      | 6       |  |
| Do.....                 | Feb. 17-23.....      | 5      | 5       |  |
| Madras.....             | Nov. 24-Mar. 29..... | 37     | 36      |  |
| Moulmino.....           | Feb. 23-Mar. 1.....  | 1      | 1       |  |
| Negapatam.....          | Nov. 11-Mar. 8.....  | 34     | 34      |  |
| Rangoon.....            | Nov. 1-Dec. 28.....  | 3      | 3       |  |
| Do.....                 | Dec. 29-Mar. 1.....  | 30     | 28      |  |
| Indo-China: Salgon..... | Aug. 20-Oct. 27..... | 42     | 38      |  |
| Japan.....              |                      |        |         | Total year 1912: Cases, 2,722; deaths, 1,678, exclusive of Taiwan. Total Jan. 1-Feb. 18: Cases, 83.      |
| Aita Ken.....           | Dec. 2.....          | 1      | .....   |  |
| Chiba Ken.....          | Nov. 23-Mar. 8.....  | 50     | .....   |  |
| Fukushima Ken.....      | Dec. 5.....          | 1      | .....   |  |
| Harado Islands.....     | Sept. 15-Dec. 1..... | 30     | .....   |  |
| Iioga Ken.....          | Nov. 27-Dec. 19..... | 22     | .....   |  |
| Hiroshima Ken.....      | Nov. 23.....         | 1      | .....   |  |
| Ibaraki Ken.....        | Dec. 6.....          | 2      | .....   |  |
| Iwate Ken.....          | Dec. 16.....         | 1      | .....   |  |
| Kanagawa Ken.....       |                      |        |         | Total Nov. 23-Feb. 4: Cases, 55. Sept. 25-Dec. 7: 9 cases from vessels.                                  |
| Yokohama.....           | Nov. 24-Jan. 14..... | 22     | .....   | Total Sept. 29, 1912, to Jan. 9, 1913: Cases, 39.  |
| Kochi Ken.....          | Nov. 28-Dec. 4.....  | 3      | .....   |  |
| Minami Tokaki gun.....  | Sept. 15-Dec. 2..... | 40     | .....   |  |
| Nagasaki Ken.....       |                      |        |         | Nagasaki Ken and outlying islands, Sept. 15-Dec. 2: Cases, 188; deaths, 134, including previous reports. |
| Nagasaki city.....      | Sept. 15-Dec. 2..... | 10     | 4       |  |
| Osaka Fu.....           | Nov. 23-Dec. 3.....  | 14     | .....   |  |
| Saga Ken.....           | do.....              | 5      | .....   |  |
| Sasebo.....             | Sept. 15-Dec. 2..... | 7      | .....   |  |
| Shidzuoka Ken.....      | Dec. 3-Feb. 11.....  | 57     | .....   |  |
| Taiwan (Formosa).....   |                      |        |         | Total year 1912: Cases, 333; deaths, 256. Not previously reported.                                       |
| Tokushima Ken.....      | Sept. 15-Dec. 1..... | 65     | .....   |  |
| Tokyo Fu.....           | Nov. 23-Feb. 4.....  | 108    | .....   |  |
| Tokyo.....              |                      |        |         | Oct. 2-Dec. 7: Cases, 273, and in vicinity, 342.   |
| Wakamatsu Ken.....      | Nov. 26.....         | 1      | .....   |  |



## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.

## CHOLERA—Continued.

| Places.              | Date.                | Cases. | Deaths. | Remarks.  |
|----------------------|----------------------|--------|---------|---|
| Russia:              |                      |        |         |   |
| Odessa.....          | Jan. 8-21.....       | 5      | 2       | Nov. 18-20: 1 case from s. s. Bosnian from Constantinople. Confined in the quarantine barracks.   |
| Servia:              |                      |        |         |   |
| Piot.....            | Apr. 10.....         | 5      |         | Among returning soldiers and prisoners.   |
| Siam:                |                      |        |         |   |
| Bangkok.....         | Oct. 13-Mar. 22..... |        | 8       |   |
| Straits Settlements: |                      |        |         |   |
| Singapore.....       | Nov. 17-23.....      | 2      | 2       |   |
| Do.....              | Jan. 27-Mar. 15..... | 3      | 2       |   |
| Turkey in Asia.....  |                      |        |         | Total, Nov. 17-23: Cases, 160; deaths, 218.   |
| Adana—               |                      |        |         |   |
| Adana.....           | Nov. 17-Dec. 2....   | 2      | 2       |   |
| Aleppo—              |                      |        |         |   |
| Aleppo.....          | Nov. 24-Dec. 2....   | 3      | 3       |   |
| Alexandretta.....    | do.....              | 3      | 2       |   |
| Angora—              |                      |        |         |   |
| Angora.....          | Nov. 24-Dec. 11...   | 29     | 23      |   |
| Balkesir.....        | Nov. 24-Dec. 2....   |        | 1       |   |
| Beirut—              |                      |        |         |   |
| Merdijoun.....       | Dec. 3-11.....       |        | 15      |   |
| Tabariyeh.....       | Dec. 13-22.....      |        |         | Present.  |
| Brusa.....           | Nov. 17-Dec. 11...   | 26     | 38      |   |
| Castamoni.....       | Nov. 17-Dec. 2....   | 6      | 4       |   |
| Dierbekir.....       | do.....              | 8      | 2       |   |
| Hedjaz—              |                      |        |         |   |
| Jedda.....           | Nov. 25-Dec. 14...   | 395    | 393     | Among returning pilgrims.   |
| Medina.....          | Dec. 3-11.....       |        | 6       |   |
| Mekka.....           | Nov. 17-23.....      | 111    | 172     | Dec. 3-11: Deaths, 3,007.   |
| Ismidt.....          | Nov. 17-Dec. 2....   | 3      | 1       |   |
| Kartal.....          | Dec. 30-Feb. 12...   | 9      | 3       |   |
| Khodavendikar—       |                      |        |         |   |
| Karassi.....         | Jan. 30-Feb. 12...   |        | 2       |   |
| Mosul.....           | Nov. 17-Dec. 2....   |        | 2       |   |
| Sinope.....          | Dec. 3-11.....       | 1      | 4       |   |
| Smyrna.....          | Nov. 17-Dec. 2....   | 3      | 1       |   |
| Syria—               |                      |        |         |   |
| Halfa.....           | Dec. 21.....         |        | 1       |   |
| Tiberias.....        | Dec. 3-25.....       | 129    | 68      |   |
| Tarsus.....          | Nov. 24-Dec. 2....   | 2      | 1       |   |
| Turkey in Europe:    |                      |        |         |   |
| Constantinople.....  | Dec. 3-Jan. 28.....  | 1,598  | 787     | Total, Nov. 5-Jan. 28: Cases, 2,515; deaths, 1,245.   |
| Do.....              | Mar. 12-Apr. 14...   | 12     | 3       | New outbreak.   |
| Zanzibar.....        | Nov. 8-Dec. 21....   | 131    | 130     | Total, Aug. 5-Dec. 23: Cases, 943; deaths, 912, including previous reports from Mwera, Chwaka, and Mokoton. Chwaka district, Oct. 4-Dec. 31, 332 cases, not included in previous reports. |
| At sea.....          |                      |        |         | Nov. 18-20: 1 fatal case on s. s. Bosnian, en route from Constantinople to Odessa.  |

## YELLOW FEVER.

|                     |                    |     |    |   |
|---------------------|--------------------|-----|----|---|
| Brazil:             |                    |     |    |   |
| Bahia.....          | Jan. 24-Mar. 8.... | 9   | 3  |   |
| Manaos.....         | Jan. 5-Apr. 5....  | 21  | 21 |   |
| British Gold Coast: |                    |     |    |   |
| Akra.....           | Mar. 22.....       |     |    | Present. Apr. 26 free.                                      |
| Ecuador:            |                    |     |    |   |
| Agua Piedra.....    | Dec. 1-31.....     | 7   | 4  |   |
| Do.....             | Jan. 1-Mar. 31.... | 10  | 6  |   |
| Bucay.....          | Nov. 15-Dec. 31... | 3   | 2  |   |
| Do.....             | Jan. 1-Mar. 31.... | 4   | 2  |   |
| Duran.....          | Nov. 1-Dec. 31.... | 3   | 3  |   |
| Do.....             | Jan. 1-Mar. 31.... | 15  | 9  |   |
| Guayaquil.....      | Nov. 1-Dec. 31.... | 25  | 16 |   |
| Do.....             | Jan. 1-Mar. 31.... | 120 | 64 | Mar. 1-31 in Guayaquil and vicinity: Cases, 52; deaths, 33. |

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.

## YELLOW FEVER—Continued.

| Places.            | Date.              | Cases. | Deaths. | Remarks.  |
|--------------------|--------------------|--------|---------|---|
| Ecuador—Continued. |                    |        |         |   |
| Milagro.....       | Nov. 1-Dec. 31.... | 2      | 2       |   |
| Do.....            | Jan. 1-Feb. 28.... | 19     | 11      |   |
| Naranjito.....     | Nov. 1-Dec. 31.... | 3      | 2       |   |
| Do.....            | Jan. 1-Mar. 31.... | 19     | 10      |   |
| Mexico:            |                    |        |         |   |
| Merida.....        | Apr. 2-10.....     | 1      | 1       | From Campeche.  |
| Senegal:           |                    |        |         |   |
| Dakar.....         | Dec. 7.....        |        |         | Present.  |
| Venezuela:         |                    |        |         |   |
| Caracas.....       | Nov. 1-Dec. 31.... | 9      | 2       | In September 2 deaths and in October 1 death not previously reported. Feb. 7, 1 case. |
| Do.....            | Jan. 1-31.....     | 2      |         |   |

## PLAGUE.

|                          |                     |     |     |   |
|--------------------------|---------------------|-----|-----|---|
| Afghanistan:             |                     |     |     |   |
| Tchebel-Bagdareh.....    | Sept. 1-30.....     |     |     | And vicinity, 100 deaths daily. Present to Oct. 29.   |
| Arabia:                  |                     |     |     |   |
| Aden.....                | Apr. 11.....        | 2   | 1   |   |
| Oran—                    |                     |     |     |   |
| Debal.....               | Feb. 16.....        |     |     | Present.  |
| Brazil:                  |                     |     |     |   |
| Bahia.....               | Jan. 12-Mar. 8....  | 11  | 4   |   |
| Pernambuco.....          | Nov. 1-Jan. 31....  |     | 11  |   |
| Rio de Janeiro.....      | Nov. 3-Mar. 1....   | 24  | 9   | Year 1912: Cases, 21. Mar. 22, cases in isolation hospital.                                 |
| Santos.....              | Dec. 1.....         | 2   | 2   |   |
| British East Africa..... | Jan. 14-Feb. 26.... |     | 17  |   |
| Dagoretti.....           | Jan. 14-Feb. 5....  | 1   |     |   |
| Kiambu.....              | Nov. 16-Dec. 8....  | 2   |     |   |
| Kisumu.....              | Dec. 8-28.....      | 7   |     |   |
| Do.....                  | Jan. 14-Feb. 26.... | 7   |     |   |
| Mombasa.....             | Oct. 1-Dec. 25....  | 16  | 12  | Free Nov. 18.   |
| Do.....                  | Feb. 6-26.....      | 5   |     |   |
| Nairobi.....             | Nov. 16-Feb. 26.... | 12  | 1   |   |
| Canary Islands:          |                     |     |     |   |
| Teneriffe—               |                     |     |     |   |
| Santa Cruz.....          | Feb. 21-27.....     |     | 5   |   |
| Chile:                   |                     |     |     |   |
| Antofagasta.....         | Feb. 12.....        |     |     | Present.  |
| Iquique.....             | Jan. 8-Mar. 8....   | 11  | 5   |   |
| Taltal.....              | Oct. 22-28.....     | 3   |     |   |
| China:                   |                     |     |     |   |
| Amoy.....                | Jan. 17-Feb. 15.... |     |     | Few sporadic cases. Pneumonic form present and in vicinity.                                 |
| Hai An.....              | Mar. 8.....         |     |     | Present in pneumonic form in 2 localities in vicinity about 48 miles from Amoy.             |
| Hoihow.....              | Nov. 1-30.....      |     |     | Present.  |
| Kulangsu.....            | Jan. 17.....        | 3   |     | International settlement of Amoy.   |
| Hongkong.....            | Jan. 12-Mar. 29.... | 11  | 11  | Total January to September, 1912: Cases, 1,848; deaths, 1,728. Apr. 25, still present.      |
| Manchuria.....           | Dec. 14.....        |     |     | Present along the railway between Harbin and Chang-Chun.                                    |
| Pakhoi.....              | Dec. 1-31.....      | 30  |     | Feb. 1, from 10 to 12 deaths daily.   |
| Shanghai.....            | Nov. 18-Dec. 15.... |     | 2   | Dec. 18, present in vicinity of the French settlement. Total 1912: Cases, 9, among natives. |
| Do.....                  | Mar. 31-Apr. 6....  |     | 1   |   |
| Swatow.....              |                     |     |     | Jan. 9, in vicinity.  |
| Colombia:                |                     |     |     |   |
| Santa Marta.....         | Apr. 11.....        |     |     | Epidemic at the barracks.   |
| Dutch East Indies.....   |                     |     |     | Total Jan. 1-Feb. 28: Cases, 1,094; deaths, 1,639.  |
| Java—                    |                     |     |     |   |
| Kediri.....              | Oct. 6-Dec. 31....  | 406 | 377 |   |
| Do.....                  | Jan. 1-Feb. 28....  | 320 | 287 |   |
| Madiocn.....             | Oct. 6-Jan. 1.....  | 98  | 96  |   |
| Do.....                  | Jan. 1-Feb. 28....  | 156 | 146 |   |

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.****PLAGUE—Continued.**

| Places.                             | Date.                | Cases. | Deaths. | Remarks.   |
|-------------------------------------|----------------------|--------|---------|--|
| <b>Dutch East Indies—Continued.</b> |                      |        |         |  |
| <b>Java—Continued.</b>              |                      |        |         |  |
| Malang.....                         |                      |        |         | Total year 1912: Cases, 1,477; deaths, 1,406, among natives; including Paseroean Residency.                        |
| Do.....                             | Jan. 1-Feb. 23.....  | 586    | 575     |  |
| Surabaya.....                       | Oct. 6-Jan. 4.....   | 43     | 43      |  |
| Do.....                             | Jan. 1-Feb. 23.....  | 32     | 31      |  |
| <b>Ecuador:</b>                     |                      |        |         |  |
| Duran.....                          | Nov. 1-Dec. 31.....  | 4      | 1       |  |
| Do.....                             | Jan. 1-Mar. 31.....  | 9      | 6       |  |
| Guayaquil.....                      | Nov. 1-Dec. 31.....  | 139    | 52      |  |
| Do.....                             | Jan. 1-Mar. 31.....  | 139    | 75      | And vicinity, Jan. 1-Feb. 24: Cases, 123; deaths, 61. Mar. 1-31, in Guayaquil and vicinity: Cases, 24; deaths, 11. |
| Milagro.....                        | Dec. 1-31.....       | 8      | 1       |  |
| Do.....                             | Jan. 1-Mar. 31.....  | 10     | 2       |  |
| <b>Egypt</b> .....                  |                      |        |         | Total Jan. 1-Dec. 31, 1912: Cases, 884; deaths, 441. Jan. 1-Mar. 31, 1913: Cases, 166; deaths, 87.                 |
| Alexandria.....                     | Mar. 2-Apr. 15.....  | 36     | 26      |  |
| Cairo.....                          | Dec. 30.....         | 1      | 1       |  |
| Port Said.....                      | Dec. 29.....         | 1      | 1       |  |
| Do.....                             | Jan. 1-Mar. 5.....   | 4      | 2       |  |
| <b>Provinces—</b>                   |                      |        |         |  |
| Assiout.....                        | Jan. 22-Apr. 17..... | 30     | 28      |  |
| Behera.....                         | Nov. 29-Dec. 12..... | 2      | 1       |  |
| Do.....                             | Mar. 10-Apr. 8.....  | 5      | 4       |  |
| Benisouef.....                      | Jan. 22-Mar. 6.....  | 6      | 4       |  |
| Charkieh.....                       | Nov. 29-Dec. 12..... | 3      | 2       |  |
| Do.....                             | Jan. 2-Mar. 22.....  | 16     | 7       |  |
| Fayoum.....                         | Jan. 19-Mar. 31..... | 36     | 16      |  |
| Galioubeh.....                      | Jan. 1-Apr. 14.....  | 3      | 1       |  |
| Garbieh.....                        | Jan. 1-Feb. 26.....  | 4      | 1       |  |
| Do.....                             | Nov. 23-Dec. 17..... | 3      | 1       |  |
| Girgeh.....                         | Jan. 1-Apr. 14.....  | 2      | 2       |  |
| Do.....                             | Dec. 21-23.....      | 1      | 1       |  |
| Gizeh.....                          | Jan. 1-Apr. 3.....   | 7      | 3       |  |
| Keneh.....                          | Apr. 15.....         | 1      | 1       |  |
| Menouf.....                         | Jan. 1-Apr. 14.....  | 43     | 21      |  |
| Do.....                             | Oct. 1-Dec. 31.....  | 13     | 7       |  |
| Minieh.....                         | Nov. 28-Dec. 29..... | 7      | 4       |  |
| Do.....                             | Jan. 23-Apr. 2.....  | 16     | 2       |  |
| Sohag.....                          | Apr. 4.....          | 15     | 6       |  |
| <b>Hawaii:</b>                      |                      |        |         |  |
| Kukuihaele.....                     | Jan. 11-31.....      | 2      | 2       |  |
| <b>India:</b>                       |                      |        |         |  |
| Bombay.....                         | Nov. 17-Mar. 29..... | 721    | 493     |  |
| Calcutta.....                       | Nov. 9-Mar. 22.....  | 1      | 151     |  |
| Madras.....                         | Dec. 29-Jan. 4.....  | 1      | 1       |  |
| Karachi.....                        | Nov. 19-Dec. 28..... | 14     | 13      |  |
| Do.....                             | Mar. 2-22.....       | 15     | 12      |  |
| Rangoon.....                        | Oct. 1-Nov. 30.....  | 68     | 68      |  |
| Do.....                             | Dec. 29-Mar. 1.....  | 205    | 199     |  |
| <b>Provinces.</b>                   |                      |        |         | Total, Oct. 27-Dec. 28: Cases, 25,212; deaths, 19,863.   |
| Delhi.....                          | Oct. 27-Dec. 28..... | 31     | 14      |  |
| Bombay.....                         | do.....              | 6,785  | 5,121   |  |
| Madras.....                         | do.....              | 1,833  | 1,337   |  |
| Bengal.....                         | do.....              | 60     | 59      |  |
| Bihar and Orissa.....               | do.....              | 1,269  | 1,025   |  |
| United Provinces.....               | do.....              | 7,844  | 6,001   |  |
| Punjab.....                         | do.....              | 952    | 709     |  |
| Burma.....                          | do.....              | 95     | 85      |  |
| Central Provinces.....              | do.....              | 404    | 301     |  |
| Mysore.....                         | do.....              | 1,506  | 1,114   |  |
| Hyderabad.....                      | do.....              | 1,498  | 1,212   |  |
| Central India.....                  | do.....              | 70     | 60      |  |
| Rajputana.....                      | do.....              | 2,862  | 2,824   |  |
| Kashmir.....                        | do.....              | 3      | 1       |  |
| <b>Provinces.</b>                   |                      |        |         | Total, Dec. 29-Mar. 1: Cases, 48,748; deaths, 40,318.  |
| Delhi.....                          | Dec. 29-Mar. 1.....  | 49     | 37      |  |
| Bombay.....                         | do.....              | 4,523  | 3,468   |  |
| Madras.....                         | do.....              | 1,923  | 1,415   |  |

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.****PLAGUE—Continued.**

| Places.                      | Date.               | Cases. | Deaths. | Remarks.   |
|------------------------------|---------------------|--------|---------|--|
| <b>India—Continued.</b>      |                     |        |         |  |
| <b>Provinces—Continued.</b>  |                     |        |         |  |
| Bengal.....                  | Dec. 29-Mar. 1....  | 96     | 92      |  |
| Bihar and Orissa.....        | do.....             | 9,257  | 7,336   |  |
| United Provinces.....        | do.....             | 25,540 | 21,843  |  |
| Punjab.....                  | do.....             | 2,476  | 2,031   |  |
| Burma.....                   | do.....             | 1,173  | 1,055   |  |
| Central Provinces.....       | do.....             | 324    | 239     |  |
| Mysore.....                  | do.....             | 1,425  | 1,072   |  |
| Hyderabad.....               | do.....             | 1,008  | 831     |  |
| Central India.....           | do.....             | 18     | 12      |  |
| Rajputana.....               | do.....             | 921    | 882     |  |
| Kashmir.....                 | do.....             | 14     | 4       |  |
| Northwest Provinces....      | Dec. 29-Feb. 1....  | 1      | 1       |  |
| Indo-China: Saigon.....      | Aug. 20-Dec. 16...  | 58     | 36      |  |
| <b>Japan:</b>                |                     |        |         |  |
| Taiwan (Formosa).....        |                     |        |         | Total, year 1912: Cases, 223; deaths, 185.   |
| Kagi.....                    | Apr. 2.....         | 10     |         |  |
| Mauritius.....               | Oct. 11-Feb. 6....  | 253    | 165     |  |
| Morocco: Rabat.....          | Nov. 1.....         | 3      |         | Among the military.  |
| <b>New Caledonia:</b>        |                     |        |         |  |
| Numea.....                   | Sept. 17-Dec. 2.... | 62     | 32      | 7 cases with 2 deaths among Europeans.   |
| <b>Peru:</b>                 |                     |        |         |  |
| <b>Departments—</b>          |                     |        |         |  |
| Ancachs.....                 | July 1-31.....      | 4      |         |  |
| Do.....                      | Aug. 1-31.....      | 4      | 3       |  |
| Arequipa.....                | July 1-Aug. 31....  | 12     | 5       | Mollendo, Nov. 17-Apr. 12: Cases, 18; deaths, 9.   |
| Callao.....                  | July 1-31.....      | 1      | 1       | Present in September; Dec. 2-Jan. 12: Cases, 7.  |
| Ferrenaje.....               | Dec. 23-Jan. 12.... | 1      |         |  |
| Ica.....                     | do.....             | 1      |         |  |
| Lambayeque.....              | Dec. 2-22.....      | 7      |         | Present in September.  |
| Jayanca.....                 | do.....             |        |         | Present.   |
| Libertad.....                | July 1-Aug. 31....  | 20     | 9       | Huamachuco, Mar. 25, present; Trujillo, Mar. 25, 15 cases in the lazaretto.  |
| Cosma.....                   | Dec. 2-22.....      |        |         | Present.   |
| Paijan.....                  | do.....             |        |         | Do.  |
| Salaverry.....               | Dec. 23-Jan. 12.... | 1      |         |  |
| San Pedro.....               | Dec. 2-Jan. 12....  | 27     |         |  |
| Trujillo.....                | do.....             | 44     |         |  |
| Lima.....                    | July 1-31.....      | 3      | 2       |  |
| Do.....                      | Aug. 1-31.....      | 4      | 2       | Dec. 2-22: Cases, 2.   |
| <b>Piura—</b>                |                     |        |         |  |
| Catacaos.....                | Dec. 2-Jan. 12....  |        |         | Present.   |
| Paita.....                   | do.....             |        |         | Do.  |
| Piura.....                   | Dec. 23-Jan. 12.... |        |         | Do.  |
| Sulanna.....                 | Dec. 2-22.....      |        |         | Do.  |
| <b>Philippine Islands:</b>   |                     |        |         |  |
| Manila.....                  | Nov. 10-Mar. 22...  | 17     | 13      |  |
| Provinces.....               |                     |        |         | Third quarter, 1912: Cases, 8; deaths, 7. Fourth quarter, 1912: Cases, 39; deaths, 33. Jan. 1-Mar. 8: Cases, 5; deaths, 5. |
| <b>Russia:</b>               |                     |        |         |  |
| Don, territory.....          | Nov. 1-Jan. 12....  |        |         | In 6 localities: 38 cases, with 22 deaths.   |
| Hutor Popova (estate)....    | Nov. 1-15.....      | 20     | 12      | Esaoul district.   |
| Moscow.....                  | Dec. 29-Jan. 11.... | 3      | 1       |  |
| <b>Transbaikal district—</b> |                     |        |         |  |
| Verneudinsk.....             | Oct. 18-28.....     | 3      | 3       | Near Nerchinsk.  |
| Trans-Caspian Ter., Merv..   | Dec. 9-21.....      | 29     | 29      | Pneumonic.   |
| <b>Siam:</b>                 |                     |        |         |  |
| Bangkok.....                 | Jan. 5-Mar. 22....  |        | 27      |  |
| <b>Turkey in Asia:</b>       |                     |        |         |  |
| Jiddah.....                  | Mar. 10-Apr. 12.... | 23     | 21      |  |

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.****SMALLPOX.**

| Places.                          | Date.               | Cases. | Deaths. | Remarks.  |
|----------------------------------|---------------------|--------|---------|---|
| Arabia: Aden.....                | Jan. 14-Apr. 7....  | 8      | 1       | Present.  |
| Abyssinia: Adis Ababa.....       | Nov. 24-Dec. 21.... |        |         |   |
| Algeria:                         |                     |        |         |   |
| Departments—                     |                     |        |         |   |
| Algiers.....                     | Oct. 1-31.....      | 11     |         |   |
| Constantine.....                 | do.....             | 11     |         |   |
| Do.....                          | Feb. 1-28.....      | 12     |         |   |
| Oran.....                        | Oct. 1-Dec. 31....  | 170    | 10      |   |
| Do.....                          | Jan. 1-Feb. 28....  | 25     | 5       |   |
| Argentina: Buenos Aires.....     | Nov. 1-Dec. 31....  |        | 7       |   |
| Do.....                          | Feb. 1-28.....      |        | 2       |   |
| Australia:                       |                     |        |         |   |
| Darwin.....                      | Feb. 12.....        |        |         | 1 case in quarantine from s. s. Eastern en route from Japan to Sydney.  |
| Austria-Hungary:                 |                     |        |         |   |
| Dalmatia.....                    | Feb. 9-15.....      | 1      |         |   |
| Galicia.....                     | Nov. 10-Dec. 7....  | 3      |         |   |
| Flume.....                       | Jan. 14-Mar. 24.... | 4      | 1       |   |
| Moravia.....                     | Jan. 17-25.....     | 2      |         |   |
| Trieste.....                     | Dec. 8-Apr. 5.....  | 47     |         | Returning travelers.  |
| Belgium:                         |                     |        |         |   |
| Antwerp.....                     | Mar. 24-31.....     | 1      |         |   |
| Brazil:                          |                     |        |         |   |
| Para.....                        | Dec. 8-Feb. 1.....  | 2      |         |   |
| Pernambuco.....                  | Nov. 1-Mar. 15....  |        | 175     |   |
| Rio de Janeiro.....              | Nov. 3-Mar. 29....  | 62     | 15      |   |
| British Columbia: Vancouver..... | Feb. 2-Mar. 1.....  | 2      |         |   |
| British East Africa:             |                     |        |         |   |
| Mombasa.....                     | Dec. 1-31.....      | 17     | 10      |   |
| Do.....                          | Feb. 1-28.....      | 16     | 3       |   |
| Canada:                          |                     |        |         |   |
| Provinces—                       |                     |        |         |   |
| British Columbia—                |                     |        |         |   |
| Fernie.....                      | Feb. 23-Mar. 1....  | 12     |         | Apr. 22, 1 case in vicinity.  |
| Vancouver.....                   | Apr. 13-19.....     | 1      |         |   |
| Manitoba—                        |                     |        |         |   |
| Winnipeg.....                    | Mar. 30-Apr. 19.... | 11     |         |   |
| Ontario—                         |                     |        |         |   |
| Cornwall.....                    | Mar. 16-22.....     | 2      |         |   |
| Fort William.....                | Mar. 31-Apr. 16.... | 4      |         |   |
| Hamilton.....                    | Jan. 1-Mar. 31....  | 60     |         |   |
| Niagara Falls.....               | Feb. 1-28.....      | 9      |         |   |
| Ottawa.....                      | Jan. 4-Apr. 12....  | 39     |         |   |
| Port Arthur.....                 | Mar. 16.....        | 1      |         |   |
| Toronto.....                     | Dec. 1-Apr. 26....  | 12     |         |   |
| Windsor.....                     | Feb. 9-Apr. 26....  | 12     |         |   |
| Quebec—                          |                     |        |         |   |
| Montreal.....                    | Dec. 15-Apr. 26.... | 159    | 1       |   |
| Quebec.....                      | Dec. 15-Apr. 12.... | 34     |         |   |
| St. Johns.....                   | Jan. 12-Apr. 19.... | 24     |         |   |
| Chile:                           |                     |        |         |   |
| Punta Arenas.....                | Oct. 31-Nov. 30.... | 3      |         | Oct. 31, 1 case in vicinity.  |
| Do.....                          | Jan. 1-31.....      | 1      |         |   |
| China:                           |                     |        |         |   |
| Amoy.....                        | Mar. 15.....        |        | 1       | Jan. 4-Mar. 1, present.   |
| Kulangsu.....                    | Jan. 12-Feb. 29.... | 1      | 1       | Mar. 22, present.   |
| An Kho.....                      | Jan. 4.....         |        |         | Epidemic; 2 days' journey from Amoy.                                    |
| Chungking.....                   | Nov. 3-Jan. 22....  |        |         | Present.  |
| Dalny.....                       | Jan. 12-18.....     | 1      | 1       |   |
| Hankow.....                      | Dec. 29-Jan. 4....  | 1      |         |   |
| Harbin.....                      | Dec. 1-31.....      | 6      |         |   |
| Do.....                          | Jan. 17-Feb. 13.... | 2      |         |   |
| Hoihow.....                      | Jan. 3.....         |        |         | Do.   |
| Hongkong.....                    | Nov. 24-Mar. 29.... | 71     | 49      | Do.   |
| Nanking.....                     | Dec. 7-Mar. 8.....  |        |         | Deaths among natives. Year 1912: Cases, 144.                            |
| Shanghai.....                    | Nov. 18-Apr. 6....  | 50     | 171     |   |
| Tientsin.....                    | Nov. 17-Mar. 22.... | 6      | 14      |   |
| Costa Rica: Limon.....           | Feb. 1.....         | 2      | 2       |   |
| Dutch East Indies:               |                     |        |         |   |
| Java—                            |                     |        |         |   |
| Batavia.....                     | Nov. 9-Mar. 15....  | 42     | 12      | Jan. 5-11, 10 cases, with 5 deaths in the district, mainly in Samarang. |
| Samarang.....                    | Oct. 4-24.....      | 57     | 23      |   |
| Do.....                          | Jan. 5-Mar. 15....  | 906    | 202     |   |



## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.

## SMALLPOX—Continued.

| Places.                     | Date.                 | Cases. | Deaths. | Remarks.  |
|-----------------------------|-----------------------|--------|---------|---|
| Egypt:                      |                       |        |         |   |
| Alexandria.....             | Dec. 9-Apr. 8.....    | 43     | 10      |   |
| Cairo.....                  | Nov. 12-Mar. 25....   | 25     | 5       |   |
| Port Said.....              | Dec. 3-31.....        | 1      | 1       |   |
| France:                     |                       |        |         |   |
| Marseille.....              | Nov. 1-Mar. 31.....   |        | 23      |   |
| Nantes.....                 | Jan. 5-Mar. 31.....   | 8      |         |   |
| Nice.....                   | Feb. 1-28.....        | 2      |         |   |
| Paris.....                  | Dec. 1-Apr. 12.....   | 47     | 1       |   |
| Germany.....                |                       |        |         | Total: Nov. 24-30, 5 cases not included in report, p. 2231, vol. xxvii; Dec. 1-Apr. 12, 59 cases.   |
| Breslau.....                | Jan. 19-25.....       | 1      |         |   |
| Hamburg.....                | Jan. 10-Mar. 29.....  | 4      |         |   |
| Kehl.....                   | Feb. 1-28.....        |        | 1       |   |
| Gibraltar.....              | Dec. 9-Mar. 16.....   | 3      | 1       |   |
| Great Britain:              |                       |        |         |   |
| Glasgow.....                | Mar. 29-Apr. 2.....   |        | 2       |   |
| Hull.....                   | Mar. 8-Apr. 1.....    | 5      |         |   |
| Liverpool.....              | Jan. 1-Apr. 19.....   | 4      |         |   |
| Newcastle on Tyne.....      | Feb. 9-15.....        | 15     |         |   |
| Sheffield.....              | Feb. 26-Mar. 2.....   | 1      |         |   |
| Greece:                     |                       |        |         |   |
| Athens.....                 | Feb. 10-Apr. 5.....   | 1      | 3       |   |
| Patras.....                 | Mar. 3-Apr. 13.....   |        | 28      | Epidemic.   |
| Piræus.....                 | Jan. 1-31.....        | 16     |         |   |
| Hawaii: Paauhau.....        | May 2.....            | 1      |         |   |
| Honduras: Trujillo.....     | Feb. 2-8.....         | 1      |         |   |
| India:                      |                       |        |         |   |
| Bombay.....                 | Nov. 17-Mar. 22.....  | 135    | 49      |   |
| Calcutta.....               | Dec. 1-Mar. 8.....    |        | 27      |   |
| Karachi.....                | Dec. 1-Mar. 22.....   | 40     | 10      |   |
| Madras.....                 | do.....               | 39     | 7       |   |
| Rangoon.....                | Oct. 1-Feb. 22.....   | 55     | 15      |   |
| Indo-China: Saigon.....     | Aug. 20-Dec. 23.....  | 3      | 3       |   |
| Italy:                      |                       |        |         |   |
| Naples.....                 | Mar. 16-29.....       | 4      | 1       |   |
| Palermo.....                | Dec. 15-Feb. 15.....  | 7      |         |   |
| Turin.....                  | Feb. 3-Mar. 2.....    | 5      |         |   |
| Japan.....                  |                       |        |         | Total, year 1912: Cases, 14 deaths, 1.  |
| Hokkaido.....               | Jan. 1-31.....        | 1      |         |   |
| Nagasaki.....               | Nov. 1-Mar. 16.....   | 2      | 1       |   |
| Taiwan (Formosa).....       |                       |        |         | Year 1912: Cases, 4.  |
| Kangawaken.....             | Jan. 1-31.....        | 1      |         |   |
| Yokohama.....               |                       |        |         | Jan. 1-13, 2 cases from s. s. Pera from London via ports.   |
| Malta.....                  | Feb. 1-28.....        | 1      |         |   |
| Mexico.....                 |                       |        |         | Feb. 16: Cases, 1,500 to 2,000, with 10 per cent of deaths, mainly along the western coast. Jan. 30-Feb. 16: Present in Aguerre, Cajame, Corral, Esperanza, Navojca, Puga, and Tarin. |
| Aguascalientes.....         | Dec. 9-Apr. 13.....   |        | 38      |   |
| Chihuahua.....              | do.....               |        | 24      |   |
| Durango.....                | Dec. 1-Mar. 31.....   |        | 157     |   |
| Guadalajara.....            | Jan. 5-Apr. 5.....    | 18     | 3       |   |
| Hermosillo.....             | Feb. 16-Apr. 23.....  | 14     |         |   |
| Juarez.....                 | Mar. 1-29.....        | 2      |         |   |
| Mazatlan.....               | Jan. 1-7.....         | 2      |         |   |
| Mexico.....                 | Nov. 17-Mar. 8.....   | 118    | 43      |   |
| Monterey.....               | Mar. 24-13.....       |        | 4       |   |
| Salina Cruz.....            | Nov. 17-Mar. 29.....  | 11     | 5       |   |
| San Luis Potosi.....        | Sept. 15-Feb. 15..... | 7      | 3       |   |
| Sonora—                     |                       |        |         |   |
| Agua Zarca.....             | Jan. 30.....          | 2      |         |   |
| Nogales.....                | do.....               | 1      |         |   |
| Tamaulipas, State.....      | Apr. 16.....          |        |         | Epidemic in Chamal, 100 miles north of Tampico.   |
| Veracruz.....               | Jan. 26-Apr. 5.....   | 13     | 1       | 1 case imported from Pasco del Macho.   |
| Netherlands: Rotterdam..... | Dec. 22-28.....       |        | 1       |   |
| Newfoundland: St. John..... | Feb. 23-Mar. 15.....  | 6      |         |   |

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received from Dec. 27, 1912, to May 9, 1913—Continued.

## SMALLPOX—Continued.

| Places.                             | Date.                 | Cases. | Deaths. | Remarks.  |
|-------------------------------------|-----------------------|--------|---------|---|
| Peru:                               |                       |        |         |   |
| Callao.....                         | Sept. 1-14.....       |        |         | Present.  |
| Lima.....                           | do.....               |        |         | Do.   |
| Mollendo.....                       | Nov. 24-Dec. 7.....   | 5      | 1       |   |
| Salaverry.....                      | Dec. 4-11.....        | 1      |         |   |
| Philippine Islands: Manila.....     | Dec. 21.....          |        |         | 1 case removed from s. s. Maulban to the San Lazaro Hospital. Third quarter, 1912: Cases, 9; deaths, 0. Fourth quarter, 1912: Cases, 16; deaths, 0. |
| Portugal: Lisbon.....               | Dec. 1-Apr. 12.....   | 45     |         |   |
| Roumania.....                       |                       |        |         | Total, Oct. 1-31: Cases, 6.   |
| Russia:                             |                       |        |         |   |
| Batoum.....                         | Dec. 1-31.....        | 1      |         |   |
| Libau.....                          | Dec. 16-Jan. 4.....   | 2      |         |   |
| Moscow.....                         | Dec. 8-Apr. 5.....    | 36     | 10      |   |
| Odessa.....                         | Nov. 17-Apr. 12.....  | 9      | 3       |   |
| St. Petersburg.....                 | Nov. 24-Apr. 5.....   | 125    | 16      |   |
| Warsaw.....                         | Sept. 22-Jan. 11..... | 33     | 7       |   |
| Riga.....                           | Dec. 1-31.....        | 1      |         |   |
| Siberia—                            |                       |        |         |   |
| Omsk.....                           | Jan. 1-27.....        | 7      |         |   |
| Vladivostok.....                    | Dec. 15-28.....       | 4      | 1       |   |
| Do.....                             | Jan. 1-13.....        | 4      |         |   |
| Servia: Belgrade.....               | Dec. 22-28.....       | 2      |         |   |
| Siam: Bangkok.....                  | Nov. 10-Mar. 22.....  |        | 11      |   |
| Spain:                              |                       |        |         |   |
| Almeria.....                        | Dec. 1-31.....        |        | 40      | No longer epidemic.   |
| Do.....                             | Jan. 1-Mar. 31.....   |        | 22      |   |
| Barcelona.....                      | Dec. 1-Apr. 19.....   |        | 193     |   |
| Cadiz.....                          | Nov. 1-Dec. 31.....   |        | 7       |   |
| Do.....                             | Feb. 1-28.....        |        | 1       |   |
| Madrid.....                         | Nov. 1-Dec. 31.....   |        | 34      |   |
| Do.....                             | Jan. 1-Mar. 31.....   |        | 64      |   |
| Malaga.....                         | Dec. 1-31.....        |        | 1       |   |
| Seville.....                        | do.....               |        | 27      |   |
| Do.....                             | Jan. 1-Mar. 31.....   |        | 27      |   |
| Valencia.....                       | Nov. 14-Apr. 12.....  | 113    | 2       |   |
| Straits Settlements: Singapore..... | Nov. 24-Mar. 1.....   | 11     | 4       |   |
| Sweden: Stockholm.....              | Oct. 8-21.....        | 3      |         |   |
| Switzerland:                        |                       |        |         |   |
| Cantons—                            |                       |        |         |   |
| Aargau.....                         | Dec. 15-Jan. 18.....  | 2      |         |   |
| Basel.....                          | Nov. 14-Apr. 5.....   | 41     |         |   |
| Grisons.....                        | Dec. 1-Feb. 1.....    | 15     |         |   |
| Turkey in Asia:                     |                       |        |         |   |
| Beirut.....                         | Dec. 8-Apr. 12.....   | 91     | 14      |   |
| Damascus.....                       | Mar. 8.....           |        |         | Present.  |
| Mersina.....                        | Mar. 9-Apr. 12.....   | 35     | 15      | 200 cases with 50 deaths estimated in the city.   |
| Smyna.....                          | Nov. 24-Dec. 14.....  |        | 5       |   |
| Do.....                             | Jan. 19-Mar. 22.....  |        | 11      |   |
| Trebizond.....                      | Mar. 9-15.....        |        |         | Do.   |
| Turkey in Europe:                   |                       |        |         |   |
| Constantinople.....                 | Dec. 1-28.....        |        | 43      |   |
| Do.....                             | Dec. 29-Apr. 12.....  |        | 141     |   |
| Union of South Africa: Durban.....  | Feb. 2-8.....         | 1      |         | Imported.   |
| Uruguay:                            |                       |        |         |   |
| Montevideo.....                     | Dec. 1-31.....        | 3      |         | Last previous case in May, 1912. Feb. 18, present.  |
| Do.....                             | Jan. 1-31.....        | 1      |         |   |
| West Indies:                        |                       |        |         |   |
| Barbados.....                       | Mar. 8.....           | 1      |         | From Grenada.   |
| Grenada.....                        | do.....               | 3      |         | In vicinity of St. Georges.   |
| Zanzibar.....                       | Nov. 8-Feb. 7.....    | 22     | 3       |   |

# SANITARY LEGISLATION.

## STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

### ARIZONA.

#### **Foodstuffs—Adulteration, False Labeling, and Misbranding of. (Act, Chap. 62, June 20, 1912.)**

SECTION 1. The manufacture, production, preparation, compounding, packing, selling, offering for sale, or keeping for sale, within the State of Arizona, or the introduction into this State from any other State, Territory, or the District of Columbia, or from any foreign country, of any article of food or liquor which is adulterated, mislabeled, or misbranded, within the meaning of this act, is hereby prohibited. Any person, firm, company, or corporation who shall import or receive from any other State or Territory or the District of Columbia or from any foreign country, or who, having received, shall deliver for pay or otherwise or offer to deliver to any other person any article of food or liquor adulterated, mislabeled, or misbranded, within the meaning of this act, or any person who shall manufacture, produce, prepare, compound, pack, sell, or offer for sale or keep for sale in the State of Arizona any such adulterated, mislabeled, or misbranded food or liquor shall be guilty of a misdemeanor: *Provided*, That no article of food shall be deemed adulterated, mislabeled, or misbranded, within the provisions of this act, when prepared for export beyond the jurisdiction of the United States and prepared or packed according to specifications or directions of the foreign purchaser, when no substance is used in the preparation or packing thereof in conflict with the laws of the foreign country to which said article is intended to be shipped; but if such foods shall be in fact sold, or kept, or offered for sale for domestic use and consumption, then this proviso shall not exempt said article from the operation of any provisions of this act.

SEC. 2. The term "food" as used in this act shall include all articles (whether simple, mixed, or compound) used for food, drink, liquor, confectionery, or condiment, by man or other animals.

SEC. 3. The standard of purity of food and liquor shall be that proclaimed by the Secretary of the United States Department of Agriculture.

SEC. 4. Food shall be deemed adulterated within the meaning of this act in any of the following cases: (1) If any substance has been mixed or packed, or mixed and packed with any food so as to reduce or lower or injuriously affect its quality, purity, strength, or food value. (2) If any substance has been substituted wholly or in part for the article of food. (3) If any essential or any valuable constituent or ingredient of the article of food has been wholly or in part abstracted. (4) If said food be mixed, colored, powdered, coated, or stained in any manner whereby damage or inferiority is concealed. (5) If said food contain any added poisonous or other added deleterious ingredient. (6) If said food consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, or any portion of any animal or vegetable unfit for food, whether said food be manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter; provided that an article of liquor shall not be deemed adulterated, mislabeled, or misbranded if it be blended or mixed with like substance so as not injuriously to reduce or injuriously to affect its quality, purity, or strength. (7) In the case of confectionery, if said confectionery contains terra alba, barytes, talc, chrome yellow, or other mineral

substance or poisonous color or flavor, or other ingredient deleterious or detrimental to health, or any vinous, malt, or spirituous liquor, compound, or narcotic drug. (8) If said confectionery does not conform to the standard of purity therefor as proclaimed by the Secretary of the United States Department of Agriculture.

Potable waters requiring bacteriological or chemical examination are included under the provisions of this act.

SEC. 5. The term "misbranded" as used herein shall apply to all articles of food, or articles which enter into the composition of food, the package or label of which shall bear any false statement, design, or device, regarding such article, or regarding the ingredients, or substances contained therein, which shall be false or misleading in any particular, and to any food product which is falsely branded as to the county, city, town, State, Territory, (or the District of Columbia) or foreign country, in which it has been manufactured, or produced.

SEC. 6. Food or liquor shall be deemed mislabeled or misbranded within the meaning of this act in any of the following cases: (1) If it be an imitation of or offered for sale under the distinctive name of another liquor or article of food. (2) If it be labeled or branded or colored so as to deceive or mislead, or tend to deceive or mislead the purchaser; or if it be falsely labeled in any respect, or if it purport (with intent to mislead the purchaser) to be a foreign product, or purport to be a foreign product when not so, or if the contents of the package as originally put up shall have been removed, in whole or in part, and other contents placed in such package. (3) If when in package, and the contents are stated in terms of weight and measure, such weight and measure are not plainly and correctly stated on the outside of the package. (4) If the package containing it, or the label of said package, shall bear any statement, design, or device regarding the ingredients or the substance contained therein, which statement, design, or device, shall be false or misleading in any particular. (5) Unless when any package bears the name of the manufacturer, jobbers, or sellers, or the grade or the class, of the product contained therein, it bears the name of the real manufacturers, jobbers, or sellers, and the true grade or class of the product, same expressed in clear and distinct English words in legible type; provided that an article of food shall not be deemed misbranded if it be a well known food product of a nature, quality, and appearance and so exposed to public inspection, as not to deceive or mislead nor tend to deceive or mislead a purchaser, and not misbranded and not of the character included within the definitions of subdivisions 1 to 4 of this section. (6) If, having no label, it is an imitation or adulteration, or is sold or offered for sale under a name, designation, description, or misrepresentation, which is false or misleading in any particular whatever; and in case of butter, eggs, and poultry, when offered or exposed for sale, if they have been kept or packed in cold storage or otherwise preserved, unless they be so indicated by written or printed label or placard plainly designating such fact, and the date of the placing in cold storage.

SEC. 7. The term "package" as used in this act shall be construed to include any phial, bottle, jar, demijohn, carton, bag, case, can, box, or barrel, or any receptacle, vessel, or container of whatsoever material or nature which may be used by a manufacturer, producer, jobber, packer, or dealer, for inclosing any article of food.

SEC. 8. The possession of any adulterated, mislabeled, or misbranded article of food or liquor by any manufacturer, producer, jobber, packer, or dealer in food, or broker, commission merchant, agent, employee, or servant of any such manufacturer, producer, jobber, packer, or dealer shall be prima facie evidence of the violation of this act.

SEC. 9. For the purpose of this act there is hereby established a State laboratory for the analysis and examination of foods, water supplies, and drugs. Said laboratory shall be under the supervision of a director, and shall be located in rooms set aside for the purpose by the University of Arizona.

The board of regents of the University of Arizona, acting in joint session with the superintendent of public health, shall appoint a director of said laboratory, who shall

be a skilled pharmaceutical chemist or bacteriologist and analyst of foods, water supplies, and drugs. Said director shall perform all duties required by this act and by the board of regents of the University of Arizona acting in joint session with the superintendent of public health.

SEC. 10. The superintendent of public health shall cause to be made by the director of the State laboratory examinations and analyses of food and liquor on sale in Arizona, suspected of being adulterated, mislabeled, or misbranded, and he may appoint such agent or agents as he may deem necessary, and the sheriffs of the respective counties of the State are hereby appointed and constituted agents for the enforcement of this act, and any agent or sheriff shall have free access, at all reasonable hours, for the purpose of examining any place where it is suspected that any article of adulterated, mislabeled, or misbranded food exists, and such agent or sheriff upon tendering the market price of said articles, if a sale be refused, may take from any person, firm, or corporation samples of any articles suspected of being adulterated, mislabeled or misbranded, and shall deliver or forward such samples to the said director of the State laboratory for examination and analysis.

SEC. 11. It shall be the duty of the superintendent of public health whenever he has satisfactory evidence of the violation of any of the provisions of this act, respecting the adulteration, mislabeling, or misbranding of foods, to report such facts to the county attorney of the county where the law is violated, after the hearing provided in section 16 of this act.

SEC. 12. It shall be a misdemeanor for any person to refuse to sell to any sheriff or other agent of the superintendent of public health, any sample of food or liquor upon tender of the market price therefor, or to conceal any such food from such officer, or to withhold from him information where such food is kept or stored. Any such person so refusing to sell, or concealing such food, or withholding such information from said officer, upon conviction shall be punished by a fine of not less than \$5 nor more than \$500, or shall be imprisoned in the county jail for a term not exceeding six months, or by both such fine and imprisonment.

SEC. 13. Whenever said director shall find from examination and analysis conducted under his supervision that adulterated or mislabeled or misbranded food has been on sale in this State, he shall forthwith report the same to the superintendent of public health.

SEC. 14. Every certificate signed by the said director of the State laboratory shall be prima facie evidence of the facts therein stated.

SEC. 15. The said director of the State laboratory shall make an annual report to the superintendent of public health on or before July 1 of each year upon adulterated, mislabeled, or misbranded foods and liquors, in which report shall be included the list of cases examined by him in which adulterants were found, and the list of articles found mislabeled or misbranded, and the names of the manufacturers, producers, jobbers, and sellers. Said report, or any part thereof, may, in the discretion of the superintendent of public health, be included by him in his report to the governor. The superintendent of public health may, in his discretion, publish any part of said report in any issue of his monthly bulletin.

SEC. 16. When any examination or analysis of the director of the State laboratory shows that any of the provisions of this act have been violated, notice of that fact, together with a copy of the certificate of the findings, shall be furnished to the party or parties from whom the sample was obtained or who executed the guaranty, as provided in this act, and a date shall be fixed by the superintendent of public health upon which date said party or parties may be heard before the superintendent of public health. The hearing shall be held in the city of Phoenix, and at least 15 days' notice thereof shall be served upon the party complained of. These hearings shall be confined to questions of fact. Parties interested therein may appear in person or by attorney and may propound interrogations and submit oral or written evidence to show any fault or error in the findings made by the director of the State laboratory.



If the examination or analysis be found correct, or if the party or parties fail to appear at such hearing after notice duly served as provided herein, the superintendent of public health shall forthwith transmit a certificate of the facts so found to the county attorney of the county in which said adulterated, mislabeled, or misbranded food was found. No publication, as in this act provided, shall be made until after said hearing is concluded.

SEC. 17. It is hereby made the duty of the sheriff of any county of this State, on presentation to him of a verified complaint of the violation of any provisions of this act, at once to obtain, by purchase, a sample of the adulterated, mislabeled, or misbranded food complained of, and divide said article into three parts, and each part shall be sealed by the sheriff with a seal provided for that purpose. If the package be less than 4 pounds in weight or in volume less than 2 quarts, three packages of approximately the same size shall be purchased and the marks and tags upon each package noted as above. One sample shall be delivered to the party from whom procured, or to the party guaranteeing such merchandise, one sample shall be sent to the director of the laboratory, and the third sample shall be sent to and held under seal by the superintendent of public health: *Provided, That* in the case of potable waters requiring bacteriological and chemical examination, or of perishable foods or drinks requiring special skill and care in sampling, the director of the State laboratory, or his representative, may make provision or issue direction for the taking and forwarding of such samples.

SEC. 18. For his services hereunder the said sheriff shall be allowed the same mileage for travel allowed by law to sheriffs on service of criminal process (together with such compensation as the board of supervisors of his county may be deemed reasonable), and all amounts expended by him in procuring and transmitting the said samples, which mileage and amount expended shall be audited and allowed by the said supervisors and paid by said county as other bills of said sheriff.

SEC. 19. It shall be the duty of the county attorney of each county to prosecute all violations of the provisions of this act occurring within his county.

SEC. 20. Any person, firm, company, or corporation, violating any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than \$5 nor more than \$500, or shall be imprisoned in the county jail for a term not exceeding six months, or by both such fine and imprisonment. Food found to be adulterated, mislabeled, or misbranded, within the meaning of this act, may, by order of any court or judge, be seized and destroyed.

SEC. 21. One-half of all fines collected by any court or judge for the violations of the provisions of this act shall be paid to the State treasurer, and the State treasurer shall deposit such money to the credit of the fund for the maintenance of the State laboratory, to be drawn against by warrants of the State auditor upon claims which shall be approved by the director of the State laboratory and the superintendent of public health.

SEC. 22. No dealer shall be prosecuted under the provisions of this act when he can establish a guaranty signed by the wholesaler, jobber, manufacturer, or other party residing in the United States from whom he purchased such articles to the effect that the same is not adulterated, mislabeled, or misbranded within the meaning of this act, designating it, and can also establish by satisfactory evidence that the article sold by him was mislabeled and that at the time of making such sale he was not aware of that fact. Said guaranty to afford protection must contain the name and address of the party or parties making the sales of such article to said dealer, and an itemized statement showing the article purchased; or a general guaranty may be filed with the Secretary of the United States Department of Agriculture by the manufacturer, wholesaler, jobber, or other party in the United States and be given a serial number, which number shall appear on each and every package of goods sold under such guaranty with the words "Guaranteed under the food and drugs act June 30, 1906." In case the wholesaler, jobber, or manufacturer, or other

party, making such guaranty to said dealer resides within this State, and it appears from the certificate of the director of the State laboratory that such article or articles adulterated, mislabeled, or misbranded within the meaning of this act or the national pure food act, approved June 30, 1906, the county attorney must forthwith notify the Attorney General of the United States of such violation.

SEC. 23. The sum of \$4,500 annually is hereby appropriated out of any money in the State treasury not otherwise appropriated for the payment of the salary of the director, not to exceed \$1,800, the purchase of equipment, apparatus, chemicals, and supplies, of said laboratory and of the office expenses in connection with the same and for the compensation of additional assistants and other necessary help. The State auditor is hereby authorized to draw his warrants for the sums herein appropriated upon the presentation of vouchers duly approved by the director of the State laboratory and the superintendent of public health and the State treasurer is hereby directed to pay the same.

SEC. 24. All acts and parts of acts in conflict or inconsistent with this act are hereby repealed.

**Vital Statistics—Bureau and Registrar of. (Act, Chap. 74, June 24, 1912.)**

SECTION 1. That section 3 of chapter 76, Session Laws of the Twenty-fifth Legislative Assembly of the Territory of Arizona, approved March 18, 1909, be, and the same is hereby, amended to read as follows:

"SEC. 3. That the secretary of the State board of health shall have general supervision over the central bureau of vital statistics, which is hereby authorized to be established by said board, and shall be the State registrar of vital statistics.

"He shall receive an annual salary at the rate of \$1,000 from the date of the taking effect of this law, to be paid in equal installments at the end of every three months, in addition to his salary as State superintendent of public health. He shall also be allowed annually a sum not to exceed \$2,500 for the purchase of official books, records, files, certificates, and papers, and for other necessary expense that may be incurred in the proper conduct of the office. Suitable fireproof vault and filing cases for the permanent and safe preservation of all official records made and returned under this act shall be provided by the custodian of the capitol for the bureau of vital statistics in the State capitol.

"The accounts of the State registrar of vital statistics shall be audited by the State board of health and the same, together with his salary, shall be paid out of the State treasury."

SEC. 2. All acts and parts of acts in conflict with the provisions of this act are hereby repealed.

SEC. 3. Whereas in the heretofore existing laws the secretary of the State board of health was allowed annually a sum not to exceed \$1,000 for contingent expenses as State registrar of vital statistics; and

Whereas it has been ascertained that the said sum of \$1,000 is not sufficient to cover the contingent expenses of said office; and

Whereas the immediate operation of this act is necessary for the public health and for the support and maintenance of the department of the State board of health, an emergency is hereby declared to exist and this act shall be in full force and effect after its passage and approval by the governor and is hereby exempt from the operation of the referendum provision of the State constitution.

**VERMONT.**

**Board of Health—Organization of. (Act No. 214, Dec. 18, 1912.)**

SECTION 1. Section 5411 of the Public Statutes, as amended by section 1 of No. 153 of the acts of 1908, is hereby amended so as to read as follows:

"SEC. 5411. Said board shall organize by electing a president and treasurer and shall appoint a secretary, who shall be a reputable practicing physician of this State,



who shall hold office until his successor is appointed and shall be the executive officer of said board. Said board may also appoint a sanitary engineer and inspector, who shall render such service as the board may require from time to time. The salary of the secretary and engineer and inspector shall be determined by said board, subject to the approval of the governor. Upon proper vouchers, approved by the president and treasurer, the auditor of accounts shall draw orders in payment of the salary and necessary expenses incurred in the discharge of their official duties of said secretary and engineer and inspector from any funds not otherwise appropriated, which payment shall not be computed as a part of the appropriation provided by section 6166 of the Public Statutes."

**Communicable Diseases—Authority of Local Health Officers to Isolate Cases of.**  
(Act No. 217, Dec. 17, 1912.)

SECTION 1. Section 5440 of the Public Statutes, as amended by section 2 of No. 217 of the acts of 1910, is hereby amended so as to read as follows:

"SEC. 5440. The local health officer may require, under the rules and regulations of the State board of health, the isolation of persons and things infected with or exposed to contagious or infectious diseases and may, with the approval of the local board of health, provide suitable places for the reception of the same and, if necessary, furnish medical treatment and care for such sick persons at their expense if of sufficient ability to pay, otherwise at the expense of the town or city. Said health officer may prohibit and prevent intercourse and communication with or use of infected premises, places, or things, and require and provide means, at the expense of the town or city for which he acts, for the thorough purification, disinfection, and cleansing of the said infected places or things before free intercourse therewith or use thereof shall be allowed."

**Prohibiting the Sale of Adulterated or Misbranded Articles of Food or Drugs.** (Act No. 221, Dec. 19, 1912.)

SECTION 1. Section 5466 of the Public Statutes, as amended by section 1 of No. 159 of the acts of 1908, is hereby amended so as to read as follows:

"SEC. 5466. No person shall sell, offer, or expose for sale an adulterated or misbranded food, drug, or substance to be used for medicine, food, or drink for men or domestic animals, or any device or apparatus falsely and fraudulently represented to have medicinal or curative qualities."

**Drugs—Misbranding of.** (Act No. 222, Dec. 17, 1912.)

SECTION 1. Section 5473 of the Public Statutes, as amended by No. 160 of the acts of 1908, is hereby amended so as to read as follows:

"SEC. 5473. For the purpose of this chapter a drug shall be deemed to be misbranded—

"(a) If it is an imitation of or offered for sale under the name of another article; or

"(b) If the contents of the package as originally put up have been removed, in whole or in part, and other contents have been placed in such package; or

"(c) If its package or label shall bear or contain any statement, design, or device regarding the curative or therapeutic effects of such article or any of the ingredients or substances contained therein which is false and fraudulent; or

"(d) If the package fails to bear a statement on the label of the quantity or proportion of any alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any such substances contained therein. Nothing in this paragraph (d) shall be construed to apply to physicians' prescriptions, or preparations recommended and prescribed in the United States Pharmacopœia or National Formulary."

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

### AUGUSTA, GA.

#### Foodstuffs—Inspection of. (Part of Ord. Bd. of H., July 30, 1912.)

SECTION 1. *Be it ordained by the Board of Health of the City of Augusta, Ga., and it is hereby ordained by the authority of the same,* That all milk, meat, fish, vegetables, fruit, or any other article sold or offered for sale, to be used for food in the city of Augusta, shall be inspected and approved by a person known as food inspector, who shall be elected by the city council of Augusta, upon the recommendation of the board of health.

#### Meat—Production, Care, and Sale. (Part of Ord. Bd. of H., July 30, 1912.)

##### INSPECTION OF LIVE AND SLAUGHTERED ANIMALS.

SEC. 2. The chief food inspector of the board of health and his assistants may enter at any time, and no person shall hinder or prevent him or them from so entering, any place in this city where live cattle, calves, sheep, goats, or swine are held, or where animals are slaughtered, or where poultry, game, fish, or oysters are dressed, scaled, or prepared to be disposed of for human food; and likewise they may enter any house, store, market stall, railroad car, wagon, or other vehicle where meat, sausage, poultry, game, fish, or oysters are prepared, packed, stored, transported, held, or kept for sale for human food; and likewise they may also enter any factory or place where dead animals are skinned or rendered, or where the offal from slaughterhouses or meat stores, such as fat, head, feet, or guts, is steamed, tanked, or otherwise disposed of.

SEC. 3. No person shall sell or offer for sale within the city limits, or otherwise dispose of for human food therein, any meat or meat product of any cattle, calf, sheep, goat, or swine which does not bear the food-inspection brand or other mark of identification of the board of health or the United States Department of Agriculture.

SEC. 4. No carcass or any part thereof of any slaughtered cattle, calf, sheep, goat, or swine shall be branded or otherwise marked for identification by the chief food inspector or his assistants until it has been carefully inspected and passed for food, and the viscera, head, tongue, tail, and caul of each and every cattle, calf, sheep, goat, or swine slaughtered when the inspector is not present shall be kept together and wholly separated from similar parts of any other carcass.

SEC. 5. No dressed carcass or any part thereof of any slaughtered cattle, sheep, goat, or swine to be used for human food shall be removed from any slaughterhouse or slaughtering place within the city limits before it has been branded or otherwise marked for identification by the chief food inspector or his assistants or by the inspector of the United States Department of Agriculture.

SEC. 6. Meats slaughtered without the city, but brought into the city for sale, may be inspected and branded or otherwise marked for identification by the chief food inspector or his assistants under the following rules, to wit: All carcasses must have the head and all viscera except the stomach, bladder, and intestines held together by

natural attachments, and all such carcasses shall be brought to a place designated by the chief food inspector, who shall be notified when such meat is ready for inspection.

SEC. 7. Any carcass or any part thereof of any slaughtered cattle, calf, sheep, goat, or swine in this city which, because of disease, injury, or any other condition, is unfit for human food shall be freely slashed with a knife and saturated with coal oil by the chief food inspector or his assistants, and shall not be sold or otherwise disposed of for human food.

#### SKINNING OF SLAUGHTERED VEAL CALVES.

SEC. 8. No veal calf at any time of slaughter shall be dressed with the skin left on the carcass, unless such skin is clean and the feet and head are removed.

#### PROTECTION FROM DIRT AND FLIES.

SEC. 9. No fresh or cured meats or meat product shall be exposed in the open air to the action of moisture, soot, dust, and flies in front of any shop, store, or other place.

SEC. 10. No meat or meat product shall be transported in any wagon or other vehicle in the city unless fully protected from moisture, soot, dust, and flies by the use of covered vehicles, with the front and back closed, or by the use of clean white cloths spread over the meat or meat products.

SEC. 11. All delivery wagons and other vehicles, together with boxes, barrels, and other containers used in transporting meats in the city, shall be kept perfectly clean, and no dirty burlap or other dirty cloths shall be used in contact with meat.

#### DISEASED ANIMALS AND UNWHOLESOME MEATS.

SEC. 12. A careful examination shall be made by the chief food inspector or his assistants at all public stockyards in this city of any live cattle, swine, sheep, goat, or calf when requested to do so by a purchaser of any such animal intended for slaughter under the post-mortem inspection of the board of health; and no person shall sell any such animal judged as diseased or otherwise unfit for human food or suspected of being diseased, or of being otherwise unfit for human food, to any butcher or any person slaughtering live stock under the post-mortem inspection of the board of health: *Provided*, That such an animal may be sold subject to a post-mortem inspection and may be removed to any slaughterhouse where post-mortem inspection is conducted by the board of health when properly tagged for identification.

SEC. 13. No person shall bring into this city, or sell or offer for sale, or give to the proprietor or agent of any packing or slaughterhouse or to any butcher in this city any cattle, hog, sheep, or lamb that is diseased, injured, crippled, immature, under weight, badly emaciated, or that for any other obvious reason might be unfit for human food without first delivering said cattle, hog, sheep, or lamb at one of the public stockyards of this city, where the chief food inspector or one of his assistants shall be called, reporting all the facts known to him relating to such animal or animals to said officer and receiving written permission from the health department so to do.

SEC. 14. No proprietor or agent of any packing house or slaughterhouse, nor any butcher in this city shall bring into this city or buy or offer to buy or accept in this city any cattle, calf, hog, sheep, or lamb that is diseased, injured, crippled, immature, under weight, badly emaciated, or that for any other obvious reason might be unfit for human food without first reporting all the facts known to him relating to such animal or animals to the chief food inspector and receiving written permission from the health department so to do.

SEC. 15. No person shall bring into this city or sell or offer for sale any meat, sausage, poultry, game, fish, or oysters that is diseased, adulterated, unsound, unwholesome, or that for any other reason is unfit for human food; and all such articles of food shall be seized and destroyed by the chief food inspector or his assistants.

## REGULATION OF PACKING HOUSES, ETC.

SEC. 16. All houses or places in this city in which meat and meat products are prepared, cured, packed, stored, handled, or sold shall be suitably lighted and ventilated and maintained in a sanitary condition. All work in such establishments shall be performed in a cleanly and sanitary manner.

(a) Ceilings, side walls, pillars, partitions, etc., shall be frequently whitewashed or painted, or, where this is impracticable, they shall, when necessary, be washed, scraped, or otherwise rendered sanitary. Where floors or other parts of the building or tables or other parts of the equipment are so old or in such condition that they can not be readily made sanitary, they shall be removed and replaced by suitable materials or otherwise put in a condition acceptable to the chief food inspector. All floors upon which meats are piled during the process of curing shall be so constructed that they can be kept in a clean and sanitary condition, and such meats shall also be kept clean.

(b) All trucks, trays, and other receptacles, all chutes, platforms, racks, tables, etc., all knives, saws, cleavers, and other tools, and all utensils and machinery used in moving, handling, cutting, chopping, mixing, canning, or other process shall be thoroughly cleansed daily if used.

(c) The aprons, smocks, or other outer clothing of employees who handle meat in contact with such clothing shall be of a material that is readily cleansed and made sanitary and shall be cleansed daily if used. Employees who handle meat or meat-food products shall be required to keep their hands clean.

(d) All toilet rooms, urinals, and dressing rooms shall be entirely separated from compartments in which carcasses are dressed or meat-food products are cured, stored, packed, handled, prepared, or sold. They shall be sufficient in number, ample in size, and fitted with modern lavatory accommodations, including toilet paper, soap, running water, towels, etc. They shall be properly lighted, suitably ventilated, and kept in a sanitary condition.

(e) The rooms or compartments in which meats or meat-food products are prepared, cured, stored, packed, or otherwise handled shall be properly lighted and ventilated and shall be so located that odors from toilet rooms, catch basins, casing departments, tank rooms, hide cellars, etc., do not permeate them. All rooms or compartments shall be provided with cuspidors which employees who expectorate shall be required to use.

(f) Persons affected with tuberculosis or any other communicable disease shall not be knowingly employed in any of the departments or establishments where carcasses are dressed, meats handled, or meat-food products prepared, and any employee suspected of being affected shall be so reported by the chief food inspector to the manager of the establishment and to the health officer.

(g) No use incompatible with proper sanitation shall be made of any part of the premises on which a slaughterhouse is located. All yards, fences, pens, chutes, alleys, etc., belonging to the premises of such establishments shall, whether they are used or not, be maintained in a sanitary condition.

(h) Butchers who dress diseased carcasses shall cleanse their hands of all grease and then immerse them in a prescribed disinfectant and rinse them in clear water before engaging again in dressing or handling healthy carcasses. All butchers' implements used in dressing diseased carcasses shall be cleansed of all grease and then sterilized, either in boiling water or by immersion in a prescribed disinfectant, and rinsed in clear water before being used again in dressing healthy carcasses. Facilities for such cleansing and disinfection, approved by the chief food inspector, shall be provided by the establishment. Separate trucks, etc., shall be furnished for handling diseased carcasses and parts. Following the slaughter of an animal affected with an infectious disease, a stop shall be made until the implements have been cleansed and disinfected unless duplicate implements are provided.

(i) Meats and meat food products intended for rendering edible products must be prevented from falling on the floor, while being emptied into the tanks, by the use of some device, such as a funnel.

(j) Butchers who dress carcasses are prohibited from holding in their mouths skewers to be used in such dressing.

SEC. 17. No dog shall be permitted in any slaughterhouse or any place where meats are prepared.

#### REGULATION OF MEAT SHOPS.

SECTION 1. All inclosed or indoor shops in which meat or meat products are stored and exposed for sale shall be kept scrupulously clean. During the summer months all doors and windows opening into such shops shall be effectively protected against the entrance of flies by the use of fly screens.

SEC. 2. No meats of any description shall be permitted to hang or stand in the open air exposed to insects or street dust, or other contaminating influences, but must be under glass or fly netting, and in summer properly iced to prevent spoiling.

Meats exposed in the open markets shall be so covered with netting as to be effectively protected from flies.

SEC. 3. Blocks or stands upon which meats are cut or chopped shall be kept scrupulously clean by frequent washing and by scraping as often as in the judgment of the inspector seems necessary.

SEC. 4. Scales, knives, and implements of every description shall be cleaned at the close of each day's business.

SEC. 5. Ice boxes, racks, and hooks shall be kept thoroughly clean by scrubbing and scraping, and ice boxes shall be scoured throughout once each week, and as much oftener as necessary.

SEC. 6. Floors must be thoroughly scraped and scrubbed; all used sawdust must be removed and fresh sawdust sprinkled or laid (where used) at least twice weekly.

SEC. 7. Meat cutters or other attendants who handle meats shall be cleanly dressed, and they shall be free from contagious or infectious disease. Their hands and outer garments shall be kept clean.

SEC. 8. No refuse, scraps, bones, rancid fat, or decaying flesh shall be kept in the ice box with fresh meats, nor shall an ice box used for the keeping of meats be employed for any other purpose.

SEC. 9. The custom of wrapping meats in old newspapers or in wrapping paper that is soiled or that has been used for any other purpose is expressly prohibited. Every piece of meat sold shall be wrapped in fresh, clean wrapping paper that has not been used for any other purpose.

SEC. 10. Live poultry shall not be kept in the same room or compartment in which meats are prepared, stored, or exposed for sale. Nor shall live poultry be kept in any room adjoining such room if the conditions are such that the room used for the storage of the live poultry ventilates into the next shop so that the odors from the fowls and their cages may contaminate the meats.

#### Fish Markets—Regulation of. (Part of Ord. Bd. of H., July 30, 1912.)

SECTION 1. Boxes, trays, stands, stalls, or other receptacles in which fish are stored or exposed for sale at retail shall be of impervious material, or, if made of wood, they shall be metal lined and kept scrupulously clean by scraping and scrubbing at the close of each day's business.

SEC. 2. The floors of the premises where fish are sold, stored, exposed, smoked, or prepared shall be of impervious material, and shall be cleaned daily by flushing and washing with liberal quantities of water and disinfected when in the judgment of the chief food inspector this is necessary.

SEC. 3. Ceilings and walls, if not painted, shall be whitewashed as required. Where painted they shall be kept clean by washing and repainted when necessary.



SEC. 4. Where fish are cleaned or dressed a metal-sheathed box shall be so placed as to catch the refuse, blood, and dripping. This box shall be emptied and thoroughly cleaned after each day's usage.

SEC. 5. In indoor wholesale fish markets the floors shall be made of impervious material and sloped so as to drain to a trapped inlet connecting with the sewer. Such floors are to be flushed and scrubbed daily with water.

SEC. 6. Outdoor fish markets or sale places shall be supplied with ice during the heated months and effectively screened against flies and other insects and from dust and other street refuse at all times.

SEC. 7. Where fish are exposed for sale outdoors, or in market houses, or from wagons or carts, a metal-lined receptacle shall be provided to catch the ice drippings and other fluids, and another receptacle, also water tight, to hold other refuse, etc., of cleaning and disemboweling. This refuse is to be removed at the close of each day's work.

**Poultry Markets and Killing Places—Regulation of. (Part of Ord. Bd. of H., July 30, 1912.)**

SECTION 1. Live poultry shall not be kept in the same storage or shop room with milk, meat, or groceries, nor shall crates used for shipping live poultry be permitted in such rooms.

SEC. 2. Storage cages, for use when live poultry is kept several days, shall be so constructed that they can be kept clean and wholesome. It is suggested that such cages be made wholly of iron, galvanized; if made of wood they must be kept in good repair and well painted. Such cages must be kept clean.

SEC. 3. Poultry must not be killed in living rooms or in rooms used for storing or selling food products. Rooms used for the killing of poultry should be kept clean and sweet and free from objectionable accumulations of any kind.

If as many as 300 fowls are killed per week, a special room shall be provided with impervious floor and walls and with special equipment as is necessary to conduct the business in a sanitary manner. Poultry-killing rooms, or establishments used for slaughter of 300 or more fowls per week, shall be subject, as far as applicable, to the regulations governing slaughterhouses.

SEC. 4. Dressed poultry may be stored and vended only in accordance with the regulations governing the storage and handling of fresh meats.

*Penalty.*—Any person, firms, or corporations who violate any of the aforesaid ordinances shall, upon conviction in recorder's court, be punished by fine not exceeding \$100 or imprisonment not exceeding 90 days.

**Milk—Production, Care, and Sale. (Ord. Bd. of H., July 30, 1912.)**

**PERMITS—INSPECTION.**

SECTION 1. *Be it ordained by the board of health of the city of Augusta, Ga., and it is hereby ordained by the authority of the same,* All persons, firms, or corporations desiring to sell or in any manner to dispose of milk within the city of Augusta, Ga., shall, before engaging in such business, make application to the office of the chief food inspector for a permit for that purpose, and shall furnish him a certificate in writing of the number of cows used in the production of such milk; the location of barns, stalls, and premises in which said cows are kept, fed, and milked; and it shall be the duty of chief inspector, or his assistants, to inspect said barn, stalls, and premises so reported, and to examine, inspect, and test said cows for disease; and if it be ascertained by said inspector, or his assistants, that said barn, stalls, and premises are properly constructed and sanitary (or may be made so under chief food inspector's supervision), and as hereinafter provided, that said cows are free from injury or dis-

ease, it shall be the duty of said inspector to issue to said applicant a permit upon the payment of the sum of \$10 for each wagon, and there shall also be charged the sum of \$5 for the keeping of a two-cow dairy, and sum of \$1 for one cow within the city limits, but there shall not be more than two cows kept on any one city lot.

SEC. 2. All persons, firms, or corporations who desire to sell or dispose of any milk or its product in any way in city of Augusta, Ga., where said milk is not produced by cows owned by him, her, or it, shall, before engaging in such business, make application at office of food inspector for a permit for that purpose and shall furnish him certificate in writing as to where and from whom said milk and its product are obtained, and said barns, stalls, and premises where said cows that produce said milk shall come under the inspection of said food inspector or his assistants, and upon payment of \$2 said applicant shall be issued permit to sell or dispose of milk or its products.

SEC. 3. All permits issued by the chief food inspector shall run for the time of one year from date of issue, but upon the failure of said applicant or party obtaining permit to comply with terms, provisions, or requirements of this ordinance or regulations that may be made from time to time by the board of health will have his, her, or its license revoked.

#### GRADE OF MILK.

SEC. 4. No person, firm, or corporation shall sell, barter, or offer for sale within the city any milk which contains more than 87.5 per cent of water or less than 3.5 per cent of butter fat and the specific gravity of which at 60° F. shall be between 1.030 and 1.034. All milk of lower grade and quality than specified by this section shall be taken and condemned as adulterated and impure by the food inspector or his assistants and vendor thereof punished.

#### SKIMMED MILK.

SEC. 5. It shall be unlawful for any person, firm, or corporation to sell or dispose of in any way or to have in custody with the intention of selling or expose or offer for sale as pure milk any milk from which the cream or any part thereof has been removed, and all such milk from which cream or any part thereof has been removed shall be plainly labeled and marked "Skim milk."

#### GRADE OF CREAM.

SEC. 6. No person, firm, or corporation shall sell, barter, or offer for sale within the city any cream which contains less than 18 per cent butter fat, and all cream of lower grade and quality than that shall be taken and condemned as adulterated and impure by food inspector or his assistants.

SEC. 7. It shall be unlawful to sell or barter or offer for sale or barter within city any butter that is not made from pure milk or cream. The same shall be free from all chemicals or adulterations and shall comply in all respects with the requirements of the pure-food laws of the United States of America.

#### GRADE OF SKIMMED MILK.

SEC. 8. Skimmed milk or separated milk that is sold, bartered, or offered for sale or bartered within the city shall contain not less than 9 per cent of milk solids exclusive of butter fat and shall be plainly labeled "Skimmed milk," and all butter-milk shall contain not less than 8.5 per cent milk solids, exclusive of butter fat, and all such milk of lower grade and quality than specified in this section shall be taken and condemned as adulterated and impure by food inspector or his assistants.



## ADULTERATION OF MILK.

SEC. 9. It shall be unlawful to add to milk intended for sale or barter in this city any chalk, borax, sodium bicarbonate, or any other preservative, ice, water, or other substance or fluid, and it shall be unlawful to sell or barter or offer for sale or barter any milk which has been added to or adulterated as aforesaid or any impure, adulterated, or unwholesome milk, and the food inspector shall condemn and destroy such milk.

SEC. 10. No person, firm, or corporation shall sell or in any manner dispose of milk and cream in this city produced from cows which have not been tested by the food inspector or his assistants or a qualified veterinarian with tuberculin for tuberculosis, and certificate of tuberculin test furnished to chief inspector by aforesaid veterinarian, and such tests shall be made at least once yearly, and where United States Government has made said test, it shall be recognized by chief inspector for a period of one year from date. The chief inspector or his assistants shall have a right at any time to enter, examine, and inspect any dairy the owner of which sells or in any manner disposes of milk or his products in the city of Augusta, and to examine, inspect, and test for disease any cow connected with or belonging to owner or proprietor of such dairy. For any interference with or hindrance of said chief inspector or assistants by owner, proprietor, or agents the permit provided for by this ordinance shall be, upon conviction in recorder's court, forfeited. Any person so hindering or preventing said inspector or assistants from making such inspection shall be punished as hereinafter provided.

## DISEASED COWS.

SEC. 11. It shall be unlawful to sell, barter, or offer for sale or barter within this city milk from cows suffering from any injury and disease which would affect the milk, especially diseases which are communicable to man or produce elevation of systematic temperature, such as tuberculosis, anthrax, Texas fever, pneumonia, parturient apoplexy (milk fever), malignant catarrh, and all such diseases.

## TAGGING COWS INSPECTED.

SEC. 12. No milk shall be used from a dairy the owner of which sells or in any manner disposes of milk in this city, unless cows have been tested by the food inspector or his assistants with tuberculin for tuberculosis, or by some qualified veterinarian satisfactory to the said inspector, providing the Government test shall be recognized as provided for in section 10. All cows so tested shall be marked in the ear with a tag bearing a serial number and the words "Augusta, Ga.," and such cow may be retested as aforesaid as often as the inspector may deem it necessary. And it shall be unlawful to sell or in any manner dispose of milk in this city from any cow which has not been so tested.

## INSPECTOR'S POWER TO MAKE INSPECTION OF DAIRIES.

SEC. 13. The food inspector, or his assistants, shall have the right to enter and examine any place within this city where milk is sold, bartered, or offered for sale or barter, and to inspect and examine at any time and any place any of said milk, and said inspector or inspectors are hereby given police power and authority.

## PROHIBITION OF CERTAIN FOOD FOR COWS.

SEC. 14. Dairy cows producing milk for the Augusta, Ga., market shall not be fed distillery waste, "swill," or any substance in a state of putrefaction or rottenness, or any other substance that is unwholesome or that will in any way affect the healthfulness of their milk; and any person, firm, or corporation who sells milk in the city of Augusta produced from cows fed on the above-described substance shall be punished as hereinafter provided.

## COWS TO RUN IN OPEN AIR, AND PREMISES TO BE DRAINED, ETC.

Each cow used in the production of milk for sale or disposal in the city of Augusta shall be allowed free movement in the open air at least six hours each day, and the barns, sheds, stalls, or premises in which the cows are kept, fed, and milked shall be properly drained, lighted, ventilated, and cleaned as per instructions of the inspector.

## PROCEDURE WHERE COWS HAVE DISEASE.

If, upon inspection as provided for in this ordinance, it is ascertained that milk cow kept, owned, or used in any dairy or on the premises of any dairyman who sells or otherwise disposes of milk in this city has the disease of tuberculosis, it shall be the duty of said inspector or assistants to notify the owner of said cow that said cow is tubercular and must be removed from the herd.

It shall be the duty of the owner upon receiving notice from the said inspector that any cow belonging to him or her and used in the dairy, or kept on his or her premises, is diseased with tuberculosis, to immediately stop using the milk from said cow and either kill or quarantine her, and keep her quarantined until said animal shall either be killed or found nontuberculous by the inspector.

If any owner of a dairy shall fail to kill or quarantine a tubercular cow upon receipt of notice from the milk and dairy inspector or his assistants, and after receiving said notice sells or offers for sale within this city any milk or butter produced from a cow or cows owned or used by him or her which are fed or milked in any of the barns, sheds, stalls, or premises in which said tuberculous cow or cows are kept or fed, or the milk of said tuberculous cow or cows, such action shall be punished as hereinafter provided.

Upon disposing of any diseased cow the owner shall at once notify the inspector in writing what disposition has been made of said cow.

## CONDITIONS OF WAGONS USED—NO WASTE HAULED.

Each wagon used in the delivery of milk shall have the name of the owner or proprietor and the number of the permit under which the business is conducted painted thereon in prominent letters. All such wagons shall be provided with covers and shall be neat and clean, the interior of such wagons being scrubbed with soap and hot water at least twice per week. The wagons shall be kept neatly painted. No vegetable or waste products shall at any time be hauled in any wagon used for the transportation of milk.

## CERTIFIED MILK.

Dairymen who wish to put a milk of exceptional excellence on the market may be allowed to use the words "certified milk" on their labels, provided that they shall receive from the inspector a certificate of the unusual excellence of said milk, and the inspector shall, upon request, give such certificate if the conditions respecting such milk hereinafter specified are found to exist. But under no other circumstances shall such or any other label likely to mislead the purchaser appear on packages containing milk. All milk sold as sterilized milk shall at all times prove to be such, and dealers purporting to sell sterilized milk shall be suspended from business should their milk be proven not to be sterile. Certified milk shall not contain over 10,000 bacteria per cubic centimeter, and shall at no time contain pathogenic germs; it shall contain 4 per cent of butter fat and other customary ingredients in proportion; it shall not be delivered to customers at a higher temperature than 50° F. and shall always be delivered in sealed packages. Barn and milk house shall be provided with a cement floor, or floor of sound heart boards laid so as to be water-tight, and there shall be arrangements of water under pressure to flush said barn and milk house. There shall also be arrangements for steam sterilization of all cans and bottles; and the barn and milk house shall be flushed three times a week and the bottles and cans shall be

sterilized each time before using: *Provided*, That the results of chemical and bacteriological examinations made and certified by the person designated by the city to make such examinations shall be considered *prima facie* correct.

REGULATING AND SALE OF CONDENSED SKIMMED MILK.

The sale of condensed skimmed milk is allowed, but it shall be unlawful to sell the said condensed skimmed milk except under the following regulations: In addition to the compliance with all existing laws, the said condensed skimmed milk to be sold in packages or containers not less than 1 gallon, which packages or containers shall be hermetically sealed at the time of sale; also that at the stores, groceries, shops, or places where such condensed milk is sold, a sign, printed or painted in black letters on white background, and on which the letters are at least 5 inches high and worded as follows, must be displayed:

Condensed skimmed milk  
should not be fed to babies,  
children, or invalids.  
It is lacking in food value.

Any person, firm, or corporation conducting a dairy depot, restaurant, or other places in which milk is sold or otherwise disposed of in this city shall at all times maintain such place in a strictly sanitary condition, to be open for inspection at all times during business hours; all ice boxes and refrigerators in which milk is kept shall be and remain in sanitary condition, being scrubbed at least once in each week, said boxes and refrigerators to be drained according to the directions of the chief inspector. There shall be no closets, hog pens, or quarters for fowls or other animals closer than 100 feet from such dairy, depot, or place where milk is sold, provided this shall not apply to water-closets properly connected to the city sewerage system and maintained in a clean and sanitary condition. Any person conducting a dairy depot or restaurant shall report within 24 hours to board of health any illness of any kind whatsoever occurring in his family or among his employees or any person connected with his business in any way, giving name and address of attending physician. The board of health shall have the power to suspend temporarily the business of any such place if they deem such action necessary to protect the public health against infection from such cases of illness.

RULES GOVERNING DEALERS, MILK, DAIRIES, AND COWS.

In addition to the rules and regulations hereinbefore set out, all persons, firms, or corporations selling or offering for sale milk in this city shall observe and comply with the following requirements: The stables in which the cows are kept must be reserved for the exclusive use of the cattle. Straw, hay, and other foods must not be stored therein. Wagons, tools, and such must also be excluded. The stable shall be provided with adequate ventilation, either by air chutes extending from the room in which the cows are kept to the outside air or by the substitution of muslin for glass in the window opening; at least 400 cubic feet of air space and 4 feet window space must be provided for each cow. The stable floors must be (and preferably made of cement) properly graded with drop or gutter 6 to 8 inches deep and constructed of some nonabsorbent material. The platform on which the cows stand shall be also kept clean at all times.

Walls and ceilings must be so constructed as to be kept easily clean and free from cobwebs. It must be made dust tight, so as to prevent dirt of any description falling down and filling air of stable with dust. The interior of the stable shall be given a thorough cleansing at least twice yearly, and oftener if so desired by inspector.

The stanchions should be of steel preferably, but good wood ones, if kept in clean condition, will be satisfactory. Cows must not be put in box stall, as the cow herself can not be kept as clean as she should.

The cows must be groomed daily, and no manure or filth allowed in the region of the udder, flanks, hips, and tail, or along the belly in close proximity of the udder.

The long hair over the udder, hips, flanks, and tail must be clipped often so as to keep them free of filth.

The udder and teats must be cleaned before milking. This best done by washing with warm water and then thoroughly drying.

In milking no one will be allowed to wet hands or teats in any manner whatsoever. Anyone found doing so will have their license revoked.

The hands of all milkers must be thoroughly washed and cleansed before beginning milking.

All pails used in milking shall be of latest approved sanitary type and must be approved of by chief food inspector.

Clean outer clothing shall be worn at all times, and should be used for no other purpose but milking.

Milkers are forbidden to spit upon the floors or walls of the stable or milk house.

The first stream from each teat should be rejected, for this milk contains a high percentage of bacteria. Therefore, in order to keep the bacterial count low, reject this milk by milking it into a separate pail.

Milk from all cows should be excluded for a period of 15 days before and 10 days after calving.

Should the milk from any cow be bloody, stringy, bitter, or unnatural in appearance, the milk from that cow shall not be used, and said cow excluded from herd until cause of the trouble is located and remedied.

The milk must not be strained within the barn where cattle are kept, but shall be immediately removed to small room just outside barn for such purpose.

The milk must be strained through cotton flannel, cheese cloth, or other suitable material, and of sufficient thickness to remove all dust and filth. Said cloth must not be used for but one milking, and must be boiled and cleansed thoroughly each time.

The milk must be immediately cooled by use of proper aerators, and cooled to 50° F.

The situation of cooler must be away from all dust, dirt, and flies, and must not be used within stable or outdoors.

A milk house must be provided, separated from stable, and also the house. It shall contain cement floor and proper drainage, plenty of windows for free circulation of air; also a proper equipment for the care of milk; also for the cleaning of the milk, utensils, bottles, cans, etc.

It shall be used for no other purpose than for the care of milk and storing of milk utensils. No rubbish shall be there stored.

It must be provided with ample supply of clean water, free from any contamination.

The windows and doors must be properly screened to exclude flies.

After each milking all utensils must be thoroughly cleansed by use of good powder and boiling water, then rinsed in clean boiling water, and inverted in place free from dust, dirt, and flies and obnoxious odors. If possible, all utensils should be subject to the action of live steam after washing. All utensils must be so constructed as to be easily cleaned. The entire water supply shall be absolutely free from contamination, and shall be sufficient for all dairy purposes. It shall be protected against flood or surface drainage, and shall be conveniently situated in relation to the milk house. All sources of contamination, such as outhouses, pigpens, manure piles, and other possible sources of contamination, shall be situated as to render impossible the contamination of the water supply.

It shall be the duty of producers who sell milk wholesale or retail to furnish at wish of board of health a list of the patrons to whom they deliver milk.

The cleaning of milk bottles in kitchen or in any inhabited portion of house, or places frequented by children, or exposed to dirt or flies shall be forbidden, and bottles before or after being cleansed shall not be kept in any place in which said exposure is possible.

No person or corporation shall sell or offer, expose or keep for sale, in any shop, store, or other places where goods and merchandise are sold, milk, cream, skimmed milk, or buttermilk, unless they are sold, or offered, exposed, or kept for sale in tightly closed or capped bottles.

All milk, cream, skim milk, and buttermilk sold in hotels, restaurants, clubs, dining rooms, eating saloons, bars, drug stores, ice-cream saloons, dairies, or other places where milk is sold as beverage shall be sold only in tightly closed or capped bottles.

The inspection of ice-cream saloons and manufactories, and all other places in which ice cream is sold or manufactured, shall cover the source of supply, the class of cream or milk product from which said ice cream is made, the condition and method of cleaning all utensils used in the making, and the condition of the utensils in which the product for its manufacture is secured.

The sale of ice cream outside of regular licensed establishments shall be prohibited, and the selling or offering for sale of ice cream by street venders shall be prohibited, excepting in sealed packages, such as bricks.

The retail sale of loose or dipped milk is forbidden. This is to apply to all dealers of milk and milk products, such as dairymen, restaurants, ice-cream fountains, etc. All milk must be sold in bottles.

No persons affected with any contagious or infectious disease, such as tuberculosis, diphtheria, typhoid fever, scarlet fever, and cholera, shall be employed in any dairy, restaurant, hotel, drug store, or, in fact, any place where milk is sold in any form.

All dairies will be scored under the score-card system as adopted by the United States Department of Agriculture, and all those falling below the required standard will be notified and will have to either come up to standard or their license will be revoked.

The chief inspector shall be equipped with a high-powered camera, and shall be required to take from time to time pictures of dairies, and said pictures shall be for public inspection and also for the proof of whether each dairy is keeping up to the standard.

The chief inspector or his assistants shall at such times as they deem it necessary take for analysis milk not to exceed 1 quart from any person or persons selling or offering for sale milk or milk products in any form, and upon these samples will be based the facts as to the analysis.

*Penalty.*—Any person, firms, or corporations who violate any of the aforesaid ordinances shall upon conviction in recorder's court be punished by fine not exceeding \$100 or imprisonment not exceeding 90 days.

#### CINCINNATI, OHIO.

#### **Cellars and Basements—Not to be Used for Living Purposes when Insanitary. (Reg. No. 71, Bd. of H., June 12, 1912.)**

No cellar, basement, or other room which is damp, dark, poorly ventilated, or otherwise liable to predispose occupants to tuberculosis or other diseases shall be occupied for dwelling or sleeping purposes.



**Privy Vaults and Cesspools—Construction and Use of. (Reg. No. 29, Bd. of H., June 5, 1912.)**

(a) No privy vault shall be constructed without a permit from the health office, and all applications for permission to dig a privy vault must be accompanied by a certificate from the department of sewers stating that there is not any sewer available for said premises.

(b) All existing toilets fixtures (except vaults) must be flushed out at least once every day, and any neglect or failure on this point will render the offender liable to be prosecuted for causing a nuisance.

(c) No roof or surface water nor kitchen slops shall be allowed to flow into any privy vault, nor shall any garbage, meats, offal, ashes, or rubbish of any kind be deposited in any privy vault or flush toilet fixture.

(d) Privy vaults that are to be abandoned must be cleaned out to the satisfaction of the health department and afterwards filled up with earth or ashes.

(e) All cases involving the location, construction, and repair of water-closets, privies, cesspools, sinks, plumbing, or drains shall be referred at once to the department of buildings. Whenever action is needed at once, the health department inspector, whenever possible, also shall notify the owner or agent verbally of the conditions.

**Privy Vaults and Cesspools—Permits and Rules for Cleaning. (Reg. No. 30, Bd. of H., June 5, 1912.)**

1. In no case shall the contents of any privy be removed unless the same is properly disinfected before the work is commenced and also during the progress of the cleaning and after the completion of the cleaning. This business must be carried on with the most strict regard to cleanliness.

2. All carts, tanks, and vessels used for the purpose must be watertight, and the same must be thoroughly washed immediately after being emptied. Such cleaning shall always take place in the immediate vicinity of the place of disposal.

3. No person shall engage in vault cleaning without a permit from the department of health, and any person holding such permit will forfeit the same by failing to comply fully with these terms, regulations, and such other rules as the department of health may hereafter adopt. Such permit shall fully specify the name of the owner or agent of the property on which the vault is situated, and shall designate its location, as well as the day or night that the work is to be done, and within the hours to be hereafter mentioned.

4. Permits shall be issued for the cleaning of vaults, cesspools, or catch basins by the health office, provided said work be done from 9 p. m. until 6 a. m. nightly, excepting Saturday nights, when the time shall be from 9 p. m. until 12 p. m., and Sunday nights from 12 p. m. to 6 a. m.

5. Sunday permits shall not be issued; but it is provided that in cases of great emergency the health officer or chief sanitary inspector may, if necessary for the public good, issue special permits at any time for the cleaning of vaults, but with this exception this regulation must be strictly adhered to.

6. Night carts must not be taken from their respective stables or places of storage until 8 p. m., and must be returned to the same place not later than 7 a. m.

7. All persons licensed by the city to clean vaults shall provide a suitable barn, stable, or inclosure for the proper storage of their tanks, carts, wagons, and tools, and in no case will a tank or cart be permitted to stand upon the streets, alleys, wharves, or vacant lots except when actually employed and in use in the business of vault cleaning unless provided with a special permit from the health office.

8. The chief sanitary inspector shall, as often as may be necessary, cause every wagon and cart that is used in the business of vault cleaning to be carefully inspected, and if any wagon or cart be found in a leaking condition, or from any cause unfit for

use, he shall notify the owner of the same that it must go out of service until placed in good condition.

9. Owners of wagons and carts used for the purpose of privy-vault cleaning shall be required to place in a conspicuous place upon each cart or wagon its number, the figures to be at least 2 inches in height, in white paint upon a black ground.

10. Whenever the use of any privy vault is discontinued, such vault must be cleaned to the bottom, provided it is 10 or less feet in depth, otherwise at least to 10 feet, and filled up with earth or other suitable material, such filling to be done only after inspection by a sanitary officer.

11. When an order to clean a privy vault shall be issued by the department of health, the contents thereof shall be cleaned to the bottom, or to the depth of not less than 7 feet from the surface of the ground in which such vault may be located.

12. Vaults may be ordered cleaned whenever the contents shall be within 4 feet of the ground surface, or whenever from foulness or other cause it may be deemed necessary to clean them. Disinfectants must be used in all foul-smelling vaults where cleaning is not necessary.

13. The contents of privy vaults must be removed in closed carts or vessels, and no part of the contents of such vault must be spilt or deposited in any yard, lot, stream, street, alley, or other public place, common, or thoroughfare, under penalty of the offender being fined not more than \$20.

14. No person shall drain into any public sewer or street gutter the contents of any cesspool or privy vault unless express permission is granted by the board of health, under penalty of being fined not more than \$50.

**Privy Vaults—Daily Reports to be Made by Cleaners. (Reg. 31, Bd. of H., June 5, 1912.)**

Every vault cleaner shall make a daily report to the department of health of the vaults cleaned and emptied by him during the preceding night. Such report shall specify the names of the persons on whose premises such vaults are located, and the location, by street and number, of such premises; also the number of loads of night soil, and the number of perpendicular feet of the same removed from each vault. Violation of this regulation, in addition to the penalties prescribed by law, will be punished by refusal to issue any further permits or extensions to the offender.

**Wells and Cisterns—To be Abandoned when Polluted. (Reg. No. 57, Bd. of H., July 24, 1912.)**

Whenever upon examination made by this department it appears that the water in any well or cistern located in or on any lot, property, building, or structure within the city of Cincinnati is polluted or likely to become so, that thereupon, after written notice given, the owner, agent, assignee, occupant, or tenant of any such lot, property, building, or structure shall abandon and fill up such well or cistern, in accordance with and under the direction of this board; and upon failure to comply with such order the health officer shall remove and fill up the said cistern or well, and the cost of the work be assessed upon such owner, agent, assignee, occupant or tenant in the manner authorized by law, or prosecute as provided by law.

**Sewers—Sewage Connections to be Disconnected if Discharge is Above Waterworks Intake. (Reg. No. 20, Bd. of H., May 15, 1912.)**

The owner or occupants of all premises that are connected with the public sewers of the city above the intake of the waterworks, which may be used for purposes other than for draining surface water, are hereby directed to disconnect the same.



**Manure—To be Removed from Stables Every Day.** (Reg. No. 21, Bd. of H., June 5, 1912.)

Every person using any stable, building, or structure in which any horse or mule is habitually kept or stabled, is required to remove the manure from such premises at least once every day and to dispose of the same to the satisfaction of the health department.

**Stables—Disinfection of Manure Boxes and Stalls.** (Reg. No. 70, Bd. of H., May 22, 1912.)

All persons who have and are operating or using barns, stables, or other buildings for the keeping or housing of horses or mules shall be required to keep all manure in a tight, covered box, and in no case will manure be permitted to accumulate as open piles in any yard or premises in the city. These boxes must be kept clean and disinfectants used therein after each emptying.

2. All persons having and operating stables, as above described, within the city limits, are required to use disinfectants about those portions of the floor where manure and urine habitually fall and are maintained.

3. All persons having and operating stables shall in all other ways possible employ means that will prevent the breeding of flies and creating of nuisances.

**Barbers and Barber Shops—Regulation of.** (Reg. No. 63, Bd. of H., July 24, 1912.)

Every barber or other person in charge of any barber shop shall keep said barber shop at all times in a cleanly and sanitary condition. The walls and ceilings shall be properly painted, whitened, or papered, and the floor shall be kept in a clean condition. Every barber shop shall be properly lighted and ventilated.

2. No person shall use any barber shop as a sleeping room or dormitory.

3. Every barber or other person in charge of any barber shop shall supply running hot and cold water, and shall use hot-water tanks for no other purpose than that of heating water.

4. Every barber or other person in charge of any barber shop shall sterilize all mugs, shaving brushes, razors, needles, clippers, shears, forceps, and other metal instruments in an approved manner after every separate use thereof.

5. Every barber shop shall provide impervious cuspidors, which shall be thoroughly cleaned daily, and every barber shall see that no person shall expectorate on the floors or walls of his shop.

6. Every barber or other person in charge of any barber shop shall use a separate and clean towel for every customer, and shall while serving said customer wear a washable apron or coat, which shall be kept clean.

7. Every barber or other person in charge of any barber shop shall provide a roll of clean paper to be placed in the back of each chair in such a way that the same may be unrolled and constitute a headrest for the customer. No portion of the said paper shall be used for more than one customer, but each customer shall be provided with a fresh, clean section of the said paper: *Provided, however,* That as a substitute for the said paper any such person may use a clean towel as a headrest and must use a separate and clean towel for each and every customer.

8. Every barber or other person in charge of any barber shop shall use alum or other material, to stop the flow of blood, in powdered or liquid form only.

9. No barber or other person in charge of any barber shop shall use sponges or powder puffs.

10. Every barber or other person in charge of any barber shop shall cleanse his hands immediately before serving each customer.

11. Every barber or other person in charge of any barber shop shall post a copy of these regulations in a conspicuous place in said barber shop.

12. No barber or other person in charge of any barber shop shall shave a customer when the surface to be shaven is inflamed or broken out or contains pus unless such person be provided with a cup, razor, and lather brush for his individual use.

13. No barber or other person in charge of any barber shop shall undertake to treat any disease of the skin.

14. No person suffering from venereal disease or other contagious, infectious, or communicable disease shall act as a barber.

**Garbage, Refuse, Offal—Disposal of. (Reg. No. 28, June 5, 1912.)**

No butchers' offal or garbage, nor any dead animals, nor any putrid or stinking animal or vegetable matter, shall be thrown by any person or be allowed to run into any street, place, or receiving basin or sewer, or into any standing water or excavation or upon the grounds or premises of any other person in the city.

**Offensive Trades—Regulation of. (Regs. Bd. of H., June 5, 1912.)**

**REG. NO. 25—TRADES PROHIBITED.**

No person shall boil, heat, steam, or render any offal, swill, bones, or impure animal matter or grease; nor shall the business of bone crushing, bone boiling, bone grinding, lime burning, nor the skinning or making glue from any dead animals or parts thereof, nor any other occupation that is dangerous or detrimental to comfort or health, be permitted in the city.

**REG. NO. 26—PERMITS FOR CARRYING ON.**

SECTION 1. No corporation, partnership, or person, either by himself or as the employee, agent, or servant of any corporation, partnership, or person, except as provided in paragraph 3 of this regulation, shall boil, steam, heat, tank, or render any animal or vegetable substance whatsoever for the purpose of manufacturing any article, substance, or material to be used or sold for commercial, industrial, or agricultural purposes, unless such corporation, partnership, or person, or the employer, principal, or master of any such person, shall first have obtained a permit so to do from the board of health.

SEC. 2. Such permit, if granted, shall be furnished without charge therefor, and shall specify where and under what terms and conditions such boiling, steaming, heating, tanking, or rendering may be carried on, and such terms and conditions shall be such as in the opinion of the board it may deem necessary for the public health and prevention of disease.

SEC. 3. Nothing herein contained shall be construed to extend to the case of butchers or dealers in meats or vegetables who boil, steam, heat, tank, or render on the premises where such business as butcher or dealer in meat or vegetables is carried on any such parts of animals or vegetables as remain after the edible or salable parts of the same have been used in their business, nor to any person boiling, steaming, heating, tanking, or rendering any such substance for domestic or culinary purposes.

SEC. 4. The board shall revoke any permit issued in pursuance hereof for any violation of any of the health laws of the State, ordinances of the city, regulations of the board of health, or terms and conditions of said permit.

**REG. NO. 27—RENDERING TO BE ODORLESS.**

The rendering, heating, or steaming of any animal or vegetable product or substance generating noisome or unwholesome odors or gaseous vapors shall be prohibited, unless such business shall be conducted in steam-tight kettles, tanks, or boilers, and such methods adopted as will entirely condense, decompose, deodorize, or destroy the odors, vapors, and gaseous products.